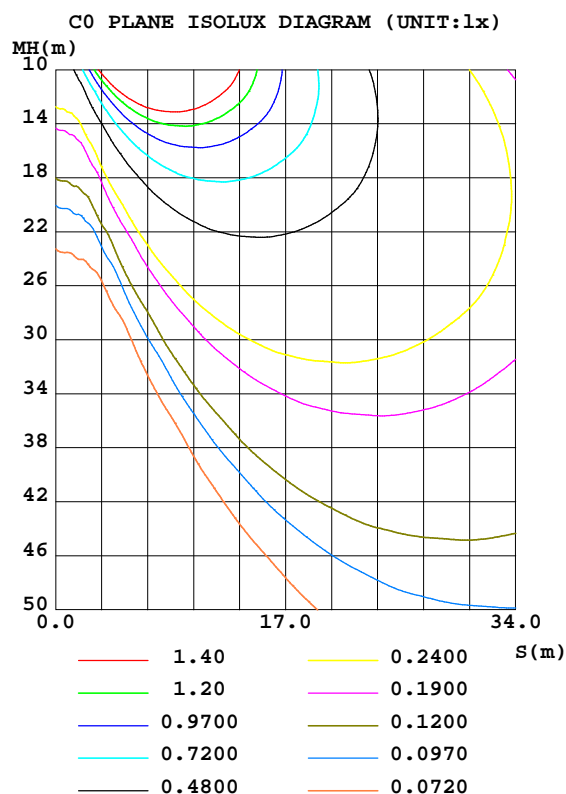
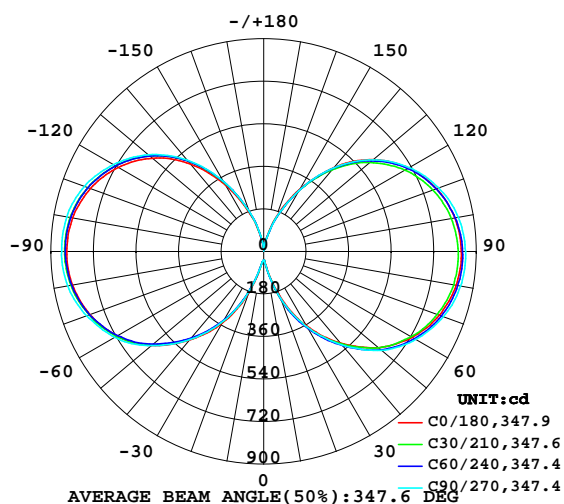


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 152.68 lm/W			
MODEL	OB200c-50W-3000K	Imax(cd)	855.8	S/MH(C0/180)	6.03
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	6.08
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	7947.7	η UP,DN(C0-180)	24.4,25.6
NOMINAL FLUX(lm)	7947.71	CIE CLASS	DIFFUSE	η UP,DN(C180-360)	25.0,24.9
LAMPS INSIDE	1	η up(%)	49.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220	η down(%)	50.5	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	62.42	69.51	70.64	66.71	56.99	51.70	50.96	54.37	0- 10	4.532	4.532	0.06,0.06
20	202.1	217.5	214.2	209.9	187.3	172.5	174.8	181.4	10- 20	36.00	40.53	0.51,0.51
30	363.9	370.1	371.0	369.9	347.7	330.6	338.4	335.5	20- 30	129.8	170.3	2.14,2.14
40	506.3	513.4	517.3	512.8	489.5	476.1	487.0	479.0	30- 40	270.0	440.3	5.54,5.54
50	634.1	644.8	650.8	641.3	620.3	611.0	620.4	609.9	40- 50	437.9	878.3	11.1,11.1
60	727.1	733.1	743.9	735.1	715.9	716.0	727.8	702.5	50- 60	610.7	1489	18.7,18.7
70	790.9	798.9	809.2	795.9	782.3	786.3	797.3	767.7	60- 70	754.3	2243	28.2,28.2
80	826.9	835.3	846.2	832.5	821.1	832.3	842.2	807.7	70- 80	860.1	3103	39,39
90	835.9	840.2	854.3	842.1	832.9	845.8	855.3	820.4	80- 90	913.7	4017	50.5,50.5
100	821.2	824.8	836.2	825.8	820.8	836.5	846.2	807.9	90-100	911.8	4929	62,62
110	777.8	776.8	788.7	782.2	779.7	797.4	807.2	768.4	100-110	855.3	5784	72.8,72.8
120	707.2	695.2	710.8	711.2	711.2	726.5	734.7	699.5	110-120	745.4	6530	82.2,82.2
130	604.9	593.3	602.7	608.2	614.8	628.3	636.9	603.0	120-130	597.0	7127	89.7,89.7
140	463.0	456.0	461.8	471.1	482.7	497.6	505.3	476.3	130-140	425.5	7552	95,95
150	302.8	294.6	295.5	308.8	326.0	339.5	344.5	320.4	140-150	252.0	7804	98.2,98.2
160	153.7	145.1	147.2	151.1	168.1	180.9	183.3	167.7	150-160	111.5	7916	99.6,99.6
170	40.55	34.80	34.62	38.45	48.48	54.22	54.42	49.65	160-170	29.71	7945	100,100
180	10.02	10.04	10.10	10.16	10.02	10.03	10.11	10.16	170-180	2.375	7948	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 637.14 lm

%lum = 8.0%

%lamp = 8.0%

Conical surface Flux(120deg): 1489 lm

%lum = 18.7%

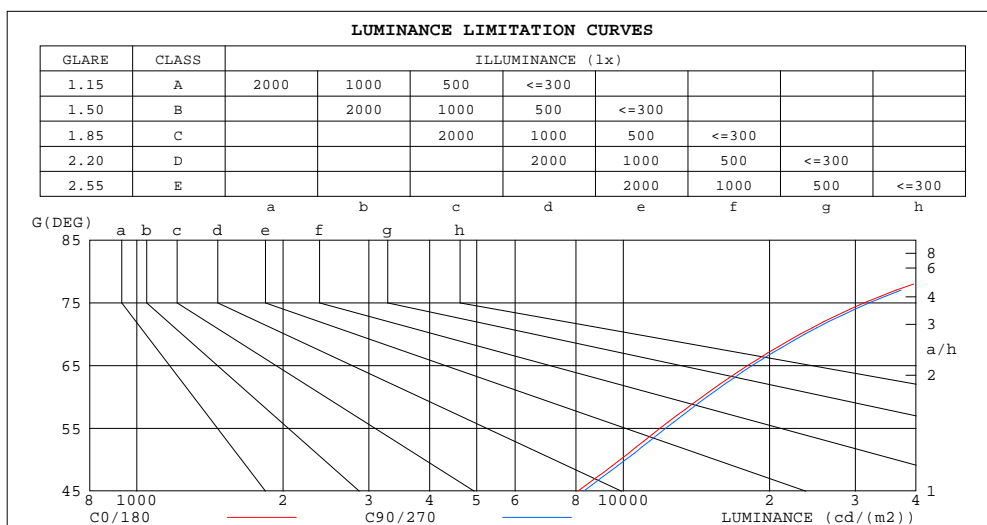
%lamp = 18.7%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

LUMINANCE LIMITATION CURVES

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	95757	97903
80	47618	48730
75	31369	32118
70	23123	23660
65	18043	18435
60	14542	14879
55	11914	12248
50	9864	10125
45	8066	8287

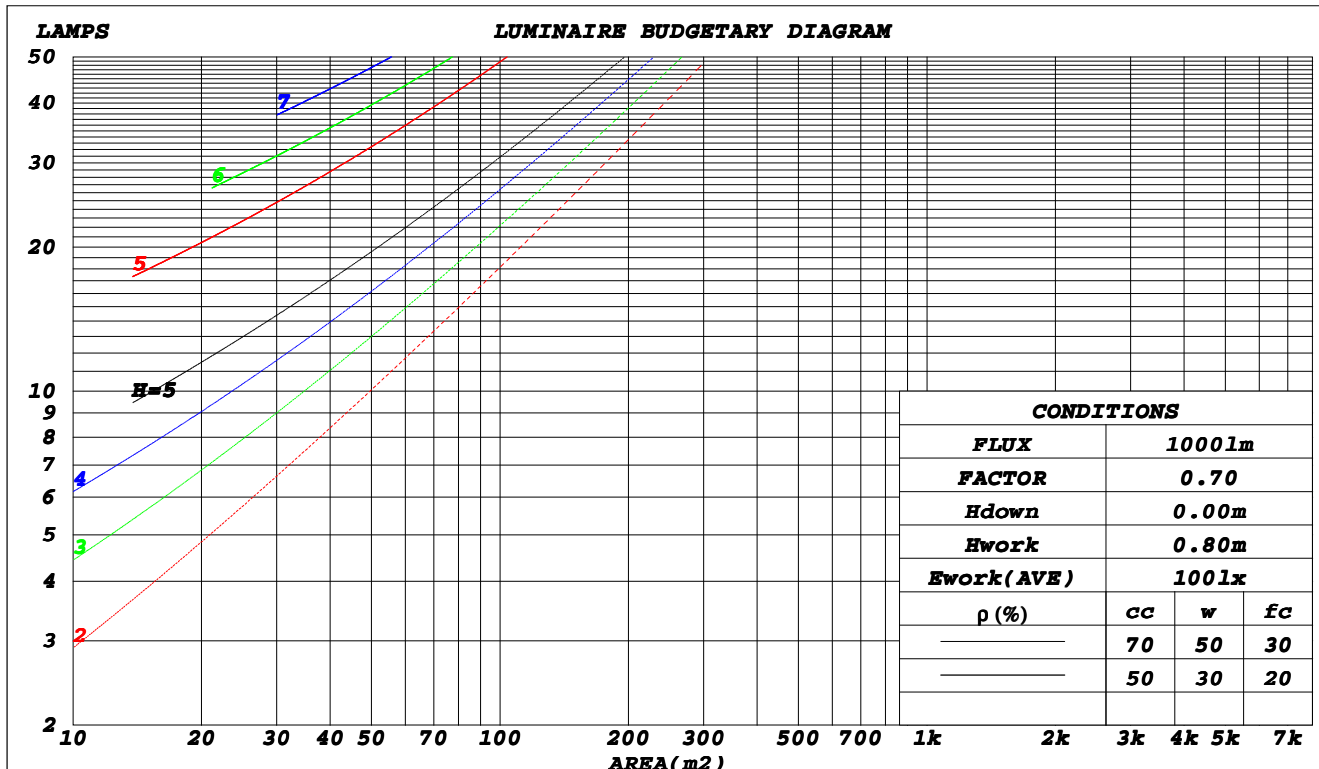
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
0.0	1.07	1.07	1.07	.99	.99	.99	.84	.84	.84	.70	.70	.70	.57	.57	.57	.51
1.0	.85	.79	.73	.78	.72	.67	.64	.60	.56	.52	.49	.46	.41	.38	.36	.30
2.0	.71	.62	.55	.65	.57	.51	.53	.47	.42	.42	.38	.34	.32	.29	.26	.21
3.0	.60	.51	.43	.55	.46	.40	.45	.38	.33	.35	.30	.26	.27	.23	.19	.15
4.0	.52	.42	.35	.48	.39	.32	.39	.32	.26	.30	.25	.21	.23	.19	.15	.11
5.0	.46	.36	.29	.42	.33	.26	.34	.27	.21	.27	.21	.17	.20	.16	.12	.09
6.0	.40	.31	.24	.37	.28	.22	.30	.23	.18	.24	.18	.14	.18	.13	.10	.07
7.0	.36	.27	.20	.33	.24	.19	.27	.20	.15	.21	.16	.12	.16	.12	.08	.05
8.0	.32	.24	.17	.29	.21	.16	.24	.18	.13	.19	.14	.10	.14	.10	.07	.04
9.0	.29	.21	.15	.27	.19	.14	.22	.16	.11	.17	.12	.09	.13	.09	.06	.04
10.0	.27	.19	.13	.24	.17	.12	.20	.14	.10	.16	.11	.07	.12	.08	.05	.03



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

WEC AND CCEC

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.443	.252	.080	.421	.240	.076	.379	.217	.069	.340	.196	.063	.305	.177	.057		
2.0	.364	.200	.061	.344	.189	.058	.305	.170	.053	.270	.152	.047	.237	.134	.042		
3.0	.315	.167	.050	.296	.158	.048	.261	.141	.043	.228	.125	.038	.198	.110	.034		
4.0	.278	.144	.042	.261	.137	.040	.229	.121	.036	.199	.107	.032	.171	.093	.028		
5.0	.249	.127	.037	.234	.120	.035	.204	.106	.031	.177	.093	.028	.151	.081	.024		
6.0	.226	.113	.032	.212	.107	.031	.185	.095	.028	.159	.083	.024	.135	.071	.021		
7.0	.207	.102	.029	.194	.097	.028	.169	.085	.025	.145	.074	.022	.123	.064	.019		
8.0	.191	.093	.026	.179	.088	.025	.155	.078	.022	.133	.067	.019	.112	.058	.017		
9.0	.177	.086	.024	.166	.081	.023	.144	.071	.020	.123	.062	.018	.104	.053	.015		
10.0	.165	.079	.022	.154	.075	.021	.134	.066	.018	.115	.057	.016	.096	.049	.014		

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)										
0.0	.567	.567	.567	.485	.485	.485	.331	.331	.331	.190	.190	.190	.061	.061	.061		
1.0	.569	.535	.504	.487	.459	.434	.333	.316	.300	.192	.183	.174	.061	.059	.056		
2.0	.564	.514	.472	.483	.442	.408	.331	.306	.284	.191	.178	.167	.061	.058	.054		
3.0	.558	.499	.453	.478	.431	.392	.328	.299	.275	.190	.175	.162	.061	.057	.053		
4.0	.550	.488	.440	.472	.422	.382	.325	.294	.269	.188	.172	.159	.060	.056	.052		
5.0	.543	.479	.432	.466	.414	.376	.321	.289	.265	.186	.170	.157	.060	.055	.052		
6.0	.535	.472	.426	.460	.409	.371	.317	.286	.262	.184	.168	.156	.059	.055	.052		
7.0	.528	.466	.422	.454	.404	.368	.314	.283	.260	.182	.167	.155	.059	.055	.051		
8.0	.522	.460	.418	.449	.399	.365	.311	.280	.259	.181	.165	.154	.058	.054	.051		
9.0	.515	.456	.416	.444	.396	.363	.308	.278	.258	.179	.164	.154	.058	.054	.051		
10.0	.510	.452	.414	.439	.393	.361	.305	.276	.257	.178	.163	.153	.058	.054	.051		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

UGR(Unified Glare Rating) Table

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm										
NAME: OB200c-50W-3000K_20200109					TYPE:LED			WEIGHT:		
SPEC.:OB200c-50W-3000K_20200109					DIM.:			SERIAL No.:1		
MFR.: ICEPIPE					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	18.6	19.8	19.5	20.7	21.8	18.8	20.0	19.7	20.9	22.0
3H	22.3	23.3	23.2	24.2	25.4	22.5	23.5	23.3	24.4	25.6
4H	24.3	25.3	25.2	26.2	27.4	24.5	25.5	25.4	26.4	27.6
6H	26.5	27.4	27.4	28.4	29.6	26.7	27.6	27.6	28.5	29.8
8H	27.7	28.6	28.6	29.5	30.8	27.9	28.8	28.8	29.7	31.0
12H	29.1	29.9	30.0	30.9	32.1	29.2	30.1	30.2	31.1	32.3
4H 2H	19.8	20.8	20.7	21.7	22.9	19.9	20.9	20.8	21.8	23.0
3H	23.5	24.3	24.4	25.3	26.5	23.6	24.5	24.5	25.4	26.7
4H	25.6	26.4	26.5	27.3	28.6	25.7	26.5	26.7	27.5	28.8
6H	27.9	28.6	28.9	29.6	30.9	28.1	28.8	29.0	29.8	31.1
8H	29.2	29.9	30.2	30.9	32.2	29.4	30.0	30.3	31.0	32.3
12H	30.7	31.3	31.6	32.3	33.6	30.8	31.4	31.8	32.4	33.8
8H 4H	26.4	27.0	27.3	28.0	29.3	26.5	27.1	27.4	28.1	29.4
6H	28.9	29.5	29.9	30.5	31.8	29.1	29.6	30.1	30.6	32.0
8H	30.4	30.9	31.4	31.9	33.3	30.5	31.0	31.5	32.1	33.4
12H	32.0	32.5	33.1	33.5	34.9	32.2	32.7	33.2	33.7	35.0
12H 4H	26.6	27.2	27.6	28.2	29.5	26.7	27.3	27.7	28.3	29.6
6H	29.3	29.8	30.3	30.8	32.1	29.4	29.9	30.4	30.9	32.3
8H	30.8	31.3	31.8	32.3	33.7	31.0	31.4	32.0	32.4	33.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 7948 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.2)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

UTILIZATION FACTORS TABLE

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

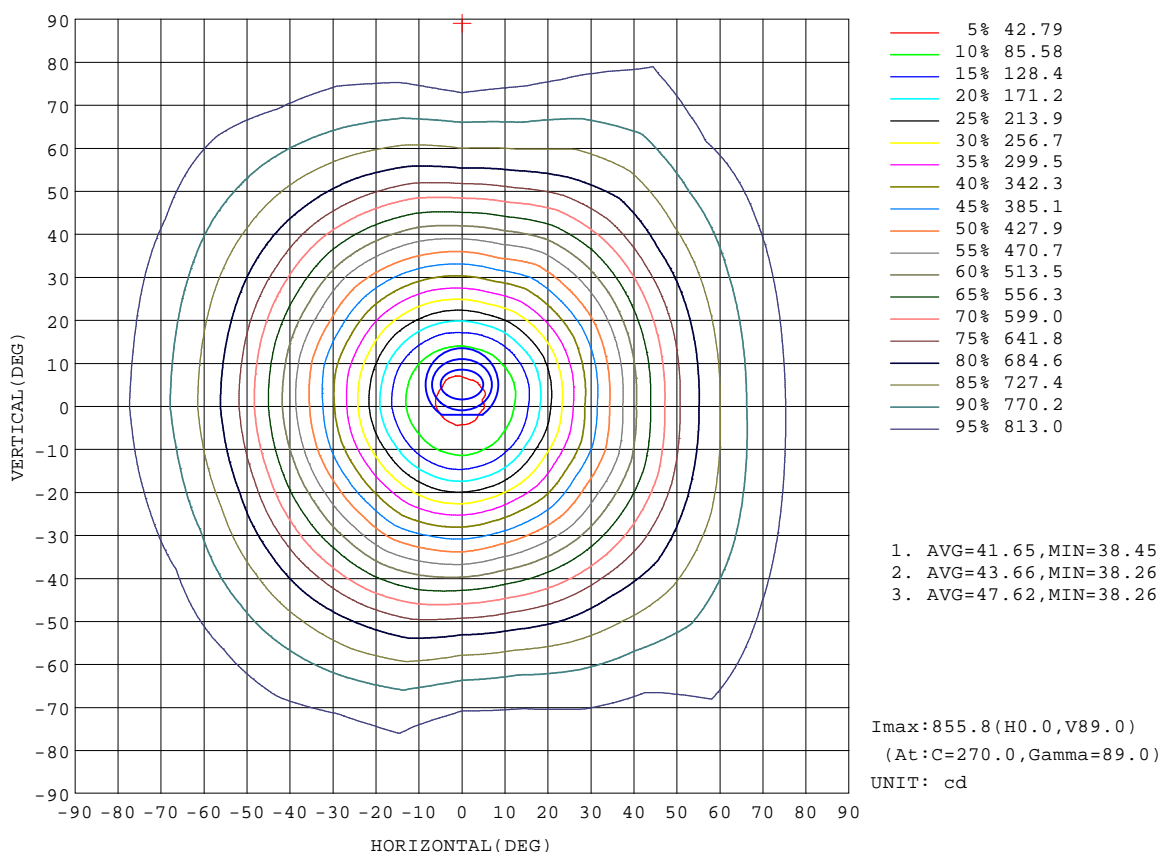
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	33	20	13	31	19	12	28	17	11	4
0.80	42	27	18	39	26	17	34	23	16	6
1.00	49	34	24	45	32	23	39	30	20	9
1.25	56	41	31	52	38	29	44	33	25	12
1.50	61	46	36	57	43	34	48	37	30	14
2.00	69	55	45	64	51	42	54	44	37	18
2.50	74	62	52	69	57	48	58	49	42	21
3.00	79	67	57	72	62	53	61	53	46	24
4.00	84	74	65	78	68	61	65	58	52	28
5.00	88	79	71	81	73	66	68	62	56	31
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

ISOCANDELA DIAGRAM

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

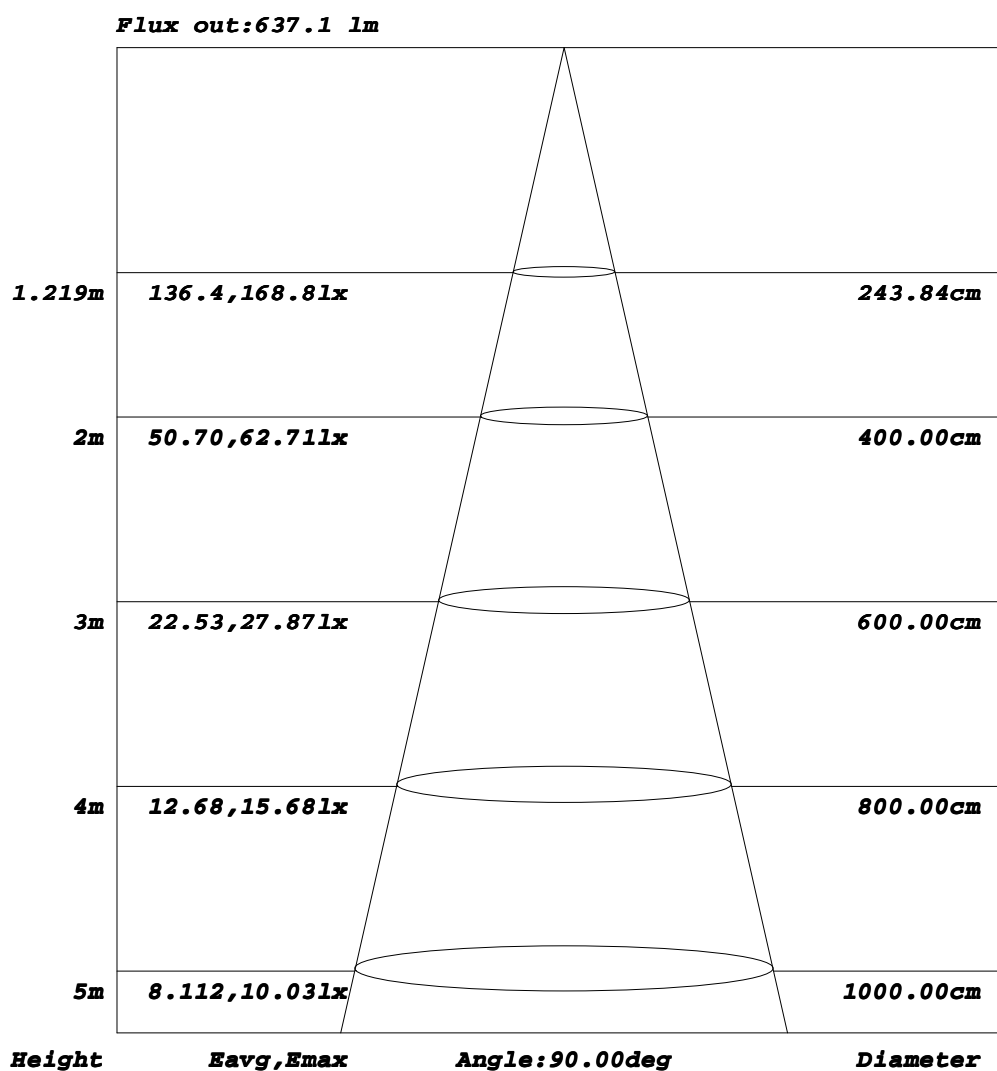


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

AAI Figure

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



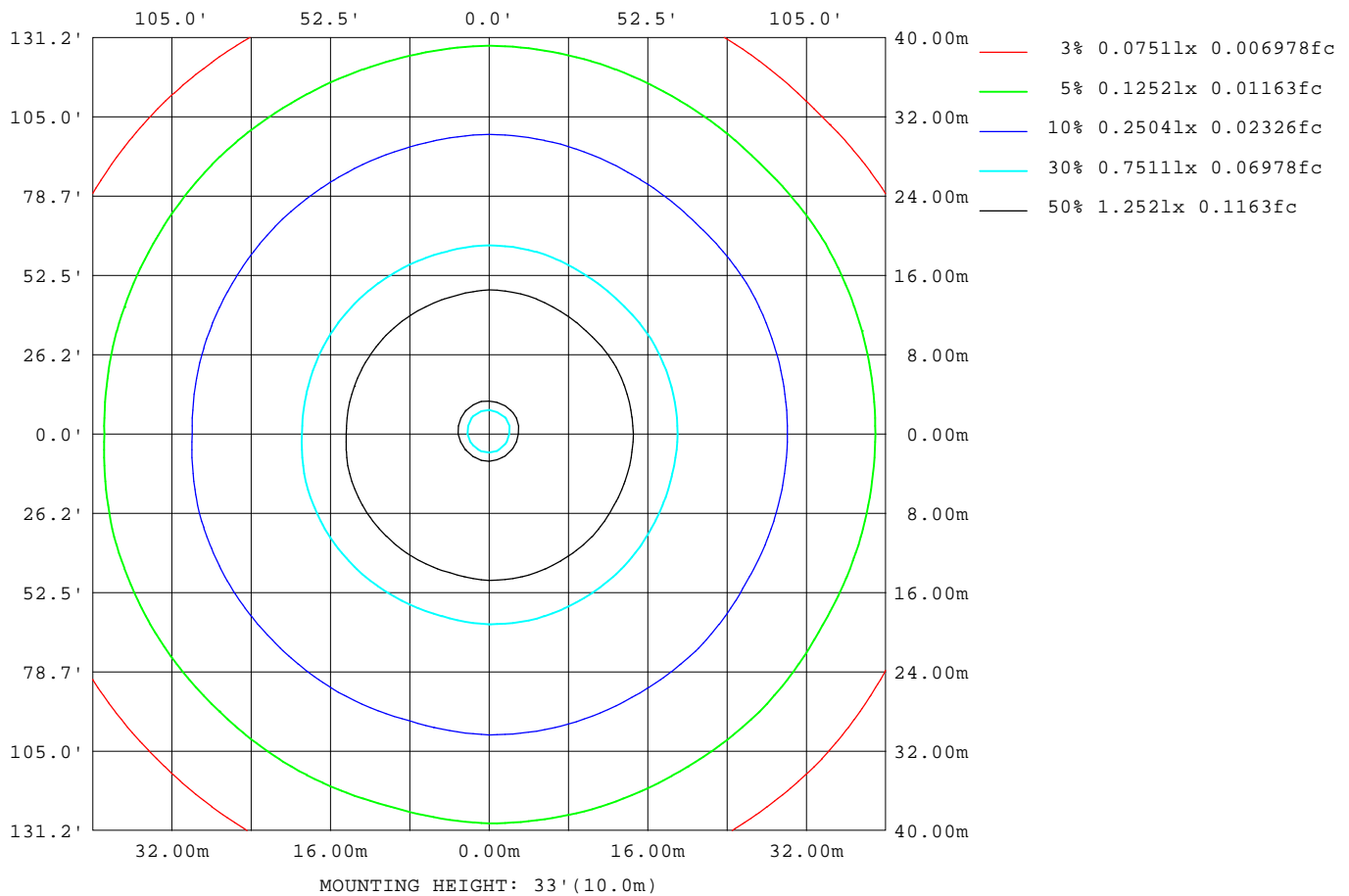
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ARK
Test Date: 09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

ISOLUX DIAGRAM

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ARK
Test Date: 09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

LED Avg.L Report

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

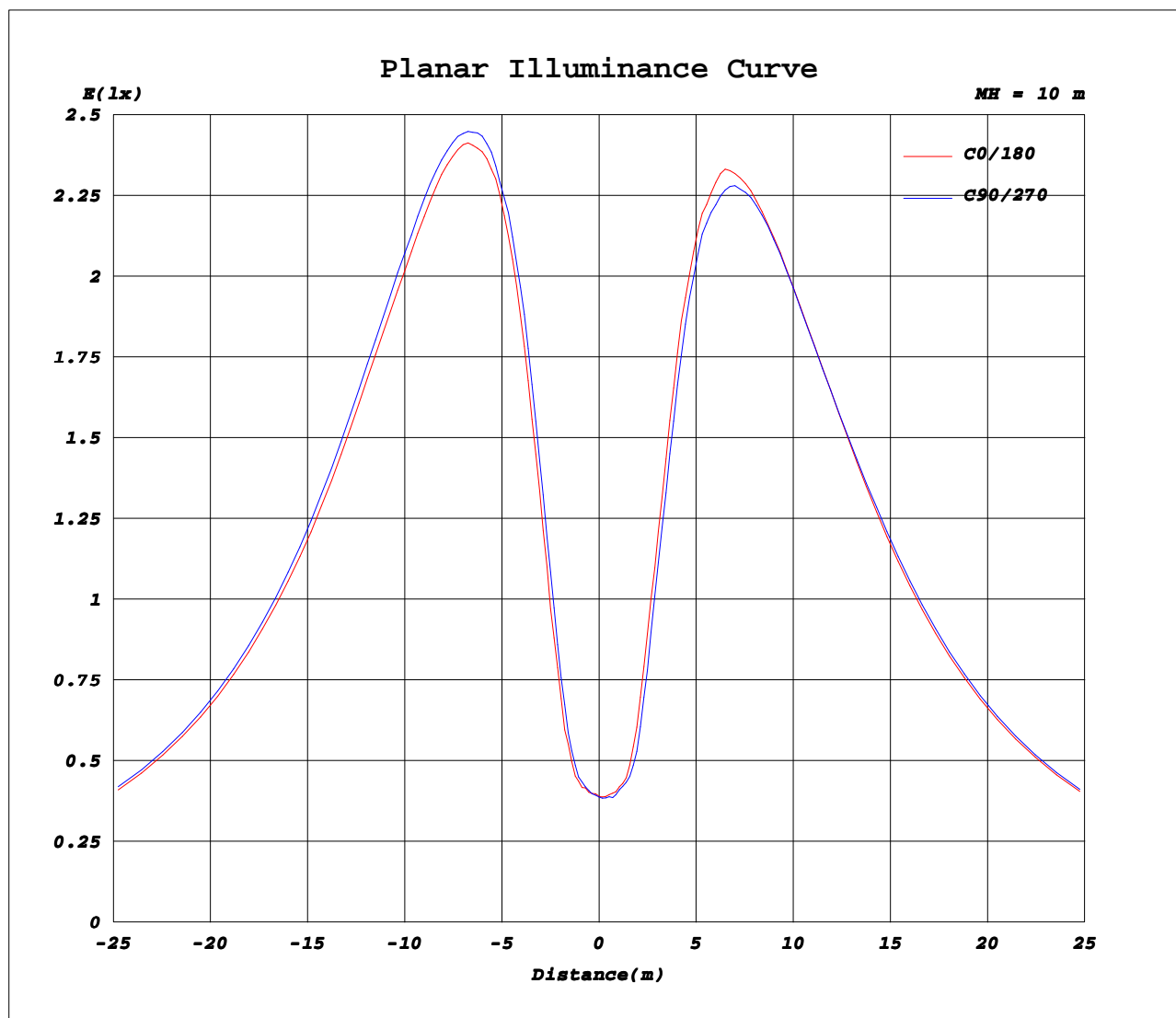
AvgL	cd/m2
L_0~180(65)av	17920
L_0~180(75)av	31226
L_0~180(85)av	95519
L_90~270(65)av	18255
L_90~270(75)av	31970
L_90~270(85)av	97845
L_45(65)av	17922
L_45(75)av	31333
L_45(85)av	95826

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ARK
Test Date: 09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	39.0	39.0	38.9	39.0	39.1	39.0	38.8	38.6	38.7	38.7	38.7	38.6	39.0	39.0	38.9	39.0	39.1	39.0	38.8
5	42.2	43.0	44.0	43.7	43.5	44.2	44.0	43.2	43.7	43.2	42.2	42.2	40.9	40.2	40.4	39.9	39.7	40.2	40.0
10	62.4	65.5	69.1	69.5	70.8	71.9	70.6	70.3	68.2	66.7	65.0	59.6	57.0	55.7	52.3	51.7	50.2	51.0	51.0
15	122	126	129	133	134	136	132	131	130	127	124	117	111	107	102	99.3	97.8	97.0	99.5
20	202	208	218	217	216	217	214	211	212	210	208	196	187	181	175	173	171	173	175
25	285	289	297	296	302	300	295	291	290	291	288	278	270	262	259	254	254	255	260
30	364	360	373	370	377	377	371	369	362	370	367	355	348	336	338	331	332	334	338
35	438	432	444	443	451	454	444	442	435	443	442	430	422	411	414	407	408	411	415
40	506	500	510	513	520	525	517	510	506	513	512	502	490	483	485	476	478	479	487
45	570	565	573	581	586	591	586	574	574	578	576	570	556	551	552	545	545	546	556
50	634	628	634	645	648	654	651	637	636	641	640	635	620	616	617	611	609	608	620
55	683	682	681	695	697	704	703	685	689	691	694	690	674	674	673	671	668	667	681
60	727	719	721	733	738	746	744	725	727	735	739	735	716	718	718	716	713	714	728
65	763	754	756	768	772	781	779	760	763	769	774	772	752	754	756	753	751	753	764
70	791	786	781	799	800	809	809	787	795	796	804	804	782	786	786	786	784	784	797
75	812	809	802	821	820	830	831	809	817	818	828	828	804	813	811	814	807	809	824
80	827	824	816	835	834	844	846	823	832	832	843	845	821	830	828	832	825	828	842
85	835	829	823	840	842	851	853	829	836	840	851	852	830	839	839	843	835	839	852
90	836	829	823	840	842	851	854	831	837	842	852	854	833	841	843	846	840	843	855
95	832	824	818	835	836	847	848	824	833	837	848	850	830	839	840	844	838	841	854
100	821	817	806	825	822	833	836	813	824	826	838	842	821	832	832	836	829	832	846
105	803	799	787	805	804	812	816	794	806	807	821	824	803	816	816	821	814	817	830
110	778	772	762	777	777	786	789	768	778	782	793	797	780	791	792	797	791	793	807
115	746	736	729	741	744	751	753	735	743	750	758	762	749	758	762	765	760	762	775
120	707	695	690	695	703	710	711	696	701	711	717	720	711	718	725	726	724	724	735
125	660	650	641	647	655	661	661	650	655	664	669	673	667	673	682	681	680	681	690
130	605	595	586	593	597	604	603	595	600	608	614	619	615	622	630	628	628	628	637
135	540	530	524	530	533	539	537	532	535	544	549	556	554	561	569	569	569	567	575
140	463	456	452	456	460	463	462	457	464	471	476	483	483	491	500	498	500	500	505
145	380	374	374	378	380	381	382	378	382	390	397	401	406	413	420	421	424	424	427
150	303	294	296	295	295	296	295	298	298	309	311	320	326	332	339	339	342	341	344
155	224	218	212	213	213	216	214	214	215	224	226	234	244	247	259	255	258	256	258
160	154	151	146	145	143	145	147	146	149	151	157	161	168	173	179	181	181	179	183
165	85.7	82.4	78.9	76.9	76.5	77.3	77.7	77.8	80.2	86.5	89.9	94.2	102	105	112	112	117	115	115
170	40.5	37.7	35.6	34.8	33.3	33.4	34.6	35.5	35.9	38.5	40.7	43.9	48.5	50.5	53.2	54.2	55.2	55.1	54.4
175	12.1	11.4	10.9	10.7	10.6	11.0	11.2	11.7	12.0	13.0	13.7	14.9	15.4	16.1	17.5	17.7	18.5	18.2	17.3
180	10.0	10.0	10.0	10.0	10.1	10.1	10.1	10.1	10.1	10.2	10.2	10.2	10.0	10.0	10.0	10.0	10.1	10.1	10.1

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:ARK

Test Date:09 January 2020

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351

Humidity:65.0%

Test Distance:8.100m [K=1.0000]

Remarks: OB200c-50W-3000K_20200109

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.6V I:0.2416A P:52.05W PF:0.9807 Lamp Flux:7947.71x1 lm		
NAME: OB200c-50W-3000K_20200109	TYPE:LED	WEIGHT:
SPEC.:OB200c-50W-3000K_20200109	DIM.:	SERIAL No.:1
MFR.: ICEPIPE	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEC)	285	300	315	330	345														
γ (DEC)																			
0	38.6	38.7	38.7	38.7	38.6														
5	40.4	40.3	41.3	41.2	43.5														
10	51.9	51.4	54.4	53.9	59.5														
15	103	100	104	105	111														
20	179	175	181	180	191														
25	265	258	260	264	273														
30	344	332	335	338	352														
35	423	405	413	415	426														
40	490	474	479	487	496														
45	556	542	545	554	563														
50	620	604	610	620	626														
55	678	664	662	677	678														
60	723	707	703	720	724														
65	760	740	740	757	762														
70	789	772	768	789	792														
75	814	798	791	814	815														
80	830	816	808	829	832														
85	841	825	818	839	841														
90	845	828	820	842	843														
95	841	825	817	838	839														
100	834	818	808	828	830														
105	817	803	792	811	812														
110	795	779	768	787	788														
115	764	748	737	754	754														
120	727	710	699	714	715														
125	683	665	655	668	668														
130	629	613	603	615	613														
135	569	555	544	552	548														
140	500	487	476	477	472														
145	423	412	400	398	392														
150	342	334	320	321	311														
155	257	250	243	242	233														
160	180	178	168	168	165														
165	115	109	104	99.4	94.6														
170	53.7	52.3	49.7	47.4	44.8														
175	14.8	13.6	13.0	13.7	12.3														
180	10.1	10.1	10.2	10.2	10.2														

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ARK
Test Date:09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity:65.0%
Test Distance:8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

Photometric Data Table [cd]

G/C	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	38.97	38.99	38.94	38.99	39.12	39.02	38.83	38.63	38.67	38.67
3.0	40.46	40.39	40.85	41.12	41.01	41.01	40.94	40.96	39.82	39.71
6.0	44.50	46.13	46.77	45.44	48.29	46.63	45.77	45.46	46.43	44.85
9.0	57.36	60.09	62.97	61.31	61.93	62.37	60.92	60.94	59.58	57.77
12.0	84.22	87.74	94.11	91.61	93.60	93.66	91.82	92.03	90.56	89.12
15.0	122.2	126.1	128.7	132.9	133.7	135.5	132.3	130.5	130.0	127.3
18.0	168.6	174.5	181.5	181.7	182.1	182.6	180.3	179.1	178.2	175.4
21.0	219.2	225.6	235.2	233.8	234.8	234.4	231.4	228.4	226.8	227.6
24.0	269.2	273.0	281.6	281.3	285.5	285.2	278.3	274.6	274.7	275.5
27.0	318.3	315.5	326.1	324.3	332.9	332.0	324.0	320.7	317.9	323.5
30.0	363.9	360.3	372.8	370.1	377.4	377.3	371.0	369.5	362.4	369.9
33.0	407.8	405.1	417.3	415.1	422.7	425.2	414.5	413.5	406.3	415.3
36.0	451.7	444.9	457.8	457.0	465.1	468.5	459.5	455.6	449.1	457.9
39.0	493.2	486.2	497.7	499.5	506.6	511.4	502.7	496.2	491.8	499.4
42.0	532.5	526.2	535.6	540.4	546.8	551.8	545.7	535.5	532.7	539.6
45.0	570.4	565.0	573.2	580.9	586.2	591.3	586.0	574.2	573.6	578.0
48.0	610.1	602.7	611.1	619.9	624.4	630.7	625.7	613.4	610.8	617.1
51.0	645.1	639.8	644.9	656.5	658.3	664.4	662.7	646.4	648.5	651.5
54.0	673.8	672.2	673.1	685.7	687.4	694.8	692.6	676.4	680.1	681.8
57.0	700.7	698.4	696.3	710.7	714.0	722.3	719.8	701.6	705.7	708.7
60.0	727.1	719.5	721.3	733.1	738.0	746.2	743.9	725.4	727.0	735.1
63.0	748.1	739.8	742.9	753.8	758.8	768.6	765.7	747.3	748.1	755.6
66.0	768.9	761.0	761.2	774.7	778.4	787.1	785.3	766.1	769.4	774.6
69.0	785.6	779.2	776.4	793.8	795.2	803.8	803.9	782.3	788.3	791.5
72.0	799.6	796.7	790.0	808.5	809.5	817.8	818.6	795.8	805.5	805.5
75.0	811.9	809.3	801.9	820.8	820.0	829.8	831.3	808.6	816.9	818.1
78.0	821.7	819.3	811.1	830.2	828.8	839.0	840.6	817.7	826.8	827.4
81.0	829.1	826.1	817.3	836.3	835.7	846.1	848.5	824.9	833.1	834.0
84.0	833.7	828.2	821.4	839.4	840.3	849.8	852.1	828.6	836.1	839.6
87.0	836.3	829.2	823.6	841.4	842.3	852.2	854.8	831.0	837.0	841.8
90.0	835.9	829.3	822.9	840.2	841.7	851.3	854.3	830.9	837.2	842.1
93.0	834.6	827.0	820.9	838.1	839.0	849.2	851.2	828.1	835.8	839.7
96.0	830.8	823.6	815.7	833.6	833.9	844.5	846.3	823.0	832.0	835.8
99.0	823.9	819.4	809.4	827.5	826.4	835.1	839.1	815.5	826.9	828.5
102.0	814.7	810.7	799.9	817.5	815.8	825.4	829.3	805.6	818.1	819.0
105.0	803.5	799.5	787.3	804.6	803.5	812.3	816.0	794.3	805.8	806.7
108.0	788.5	784.4	773.3	789.8	788.3	797.3	800.8	778.8	790.8	793.0
111.0	772.3	764.8	756.2	770.3	770.4	778.9	781.2	761.7	771.7	776.6
114.0	752.7	743.7	736.4	749.1	751.1	758.3	760.7	743.4	751.1	757.5
117.0	731.1	720.2	715.2	723.6	729.2	736.4	737.8	720.5	727.5	736.3
120.0	707.2	695.3	689.9	695.2	702.9	710.5	710.8	695.7	701.4	711.2
123.0	680.5	669.2	661.7	667.4	674.8	681.6	681.3	668.6	675.6	683.3
126.0	649.6	640.3	630.8	636.6	643.8	650.4	650.1	639.1	645.0	652.9
129.0	616.7	607.8	597.6	604.9	608.6	616.2	615.4	607.1	613.1	619.8
132.0	580.4	568.7	562.6	568.9	572.5	580.1	577.8	571.1	574.3	583.7
135.0	539.8	529.7	523.9	529.8	532.6	539.5	537.2	531.9	535.0	544.4
138.0	495.5	487.4	480.4	485.7	489.5	494.3	493.1	488.3	492.4	501.7
141.0	446.6	439.5	436.0	440.4	444.7	447.1	446.4	441.4	447.5	455.4
144.0	396.5	389.3	389.8	394.1	395.5	397.3	398.2	394.1	397.8	407.1
147.0	348.7	344.0	342.6	344.7	347.3	348.5	347.1	345.8	350.4	357.4
150.0	302.8	294.1	295.6	294.6	294.8	296.1	295.5	298.0	297.8	308.8
153.0	254.3	246.2	244.6	243.7	243.9	246.1	245.3	245.6	244.1	257.1
156.0	209.3	204.3	198.4	199.2	197.5	200.4	200.0	199.5	200.6	209.1
159.0	166.9	166.7	156.3	157.9	157.3	157.3	158.3	158.4	163.0	164.5
162.0	131.5	124.6	118.4	118.4	117.3	117.5	118.8	122.4	121.3	127.7
165.0	85.74	82.39	78.89	76.88	76.53	77.34	77.67	77.84	80.21	86.53
168.0	56.48	53.61	50.81	48.83	47.99	48.52	49.30	50.01	51.29	54.89
171.0	33.55	31.96	29.52	27.72	26.84	27.25	27.94	28.57	29.50	31.67
174.0	17.30	15.98	14.90	14.47	14.38	14.49	14.75	15.29	15.87	17.13
177.0	10.02	10.01	10.02	10.02	10.05	10.06	10.09	10.10	10.12	10.14
180.0	10.02	10.02	10.03	10.04	10.07	10.08	10.10	10.11	10.14	10.16
G/C	150.0	165.0	180.0	195.0	210.0	225.0	240.0	255.0	270.0	285.0
0.0	38.67	38.65	38.97	38.99	38.94	38.99	39.12	39.02	38.83	38.63
3.0	39.41	40.15	39.67	38.93	38.48	38.93	38.95	39.04	39.09	38.93
6.0	45.78	43.49	42.73	41.99	42.11	42.11	41.10	41.44	41.79	42.30
9.0	58.12	52.75	50.62	49.64	48.28	47.46	46.16	46.46	46.90	47.77
12.0	85.97	79.86	74.55	70.68	66.54	65.59	64.16	65.44	64.63	67.00
15.0	124.0	117.3	111.1	106.8	101.6	99.29	97.79	96.95	99.52	102.5
18.0	173.1	163.0	153.3	148.4	141.9	138.4	139.4	137.1	142.4	143.5
21.0	224.0	213.9	203.3	197.6	191.2	188.6	188.2	188.0	190.7	195.7
24.0	271.9	262.4	253.6	247.1	243.2	235.8	238.1	238.9	242.9	249.4
27.0	319.2	310.3	303.2	293.9	290.6	285.7	286.0	287.3	292.8	297.2
30.0	366.8	355.4	347.7	335.9	337.8	330.6	332.0	333.6	338.4	344.3

C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: ARK

Test Date: 09 January 2020

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351

Humidity: 65.0%

Test Distance: 8.100m [K=1.0000]

Remarks: OB200c-50W-3000K_20200109

Photometric Data Table [cd]

33.0	412.6	401.2	395.2	381.1	362.7	376.9	377.1	380.5	384.3	392.2
36.0	455.6	444.5	435.3	425.0	428.0	420.7	423.2	425.6	428.7	437.5
39.0	498.6	487.9	475.9	467.7	470.7	462.2	464.8	465.1	472.7	476.4
42.0	537.8	528.9	516.7	511.5	512.7	505.2	505.8	505.9	515.1	516.8
45.0	576.5	569.7	556.2	551.0	552.4	545.3	545.0	545.6	555.9	556.2
48.0	616.6	610.4	595.4	591.0	589.4	583.5	583.6	583.1	594.8	594.3
51.0	652.6	647.8	632.2	628.8	629.7	624.0	621.6	621.2	633.0	632.2
54.0	685.0	680.7	664.3	663.6	662.5	660.0	657.6	656.6	669.5	666.7
57.0	712.6	709.6	691.7	693.4	692.1	690.0	686.4	688.1	701.3	697.0
60.0	739.2	734.8	715.9	718.4	718.2	716.0	713.2	713.9	727.8	722.6
63.0	760.6	757.8	738.2	739.1	742.0	739.3	737.4	739.0	750.3	745.6
66.0	780.3	779.2	759.4	761.4	762.1	760.1	757.6	759.8	770.6	765.8
69.0	798.5	798.1	776.4	780.2	780.4	780.1	778.0	778.1	790.7	783.8
72.0	814.0	814.7	791.5	798.8	795.8	798.7	794.3	795.4	808.8	799.4
75.0	827.5	828.0	804.5	813.4	810.9	813.8	807.4	809.4	823.6	813.6
78.0	837.6	838.0	815.4	823.5	821.1	825.6	819.1	821.2	835.8	825.0
81.0	845.3	846.7	823.7	832.4	830.7	835.2	828.0	830.6	845.0	833.2
84.0	850.4	850.5	829.3	838.1	837.0	841.9	834.1	836.4	850.9	838.9
87.0	851.7	853.1	832.4	841.1	841.7	844.3	838.0	840.9	854.4	843.1
90.0	851.8	854.0	832.9	841.0	842.8	845.8	839.7	842.9	855.3	844.8
93.0	850.6	852.6	831.7	840.5	841.9	845.0	838.9	842.7	854.7	843.5
96.0	846.5	848.9	829.2	837.8	838.6	842.7	836.2	839.3	852.2	841.6
99.0	841.2	843.7	823.3	833.6	833.4	838.6	831.5	835.3	848.0	835.0
102.0	831.9	835.1	815.2	826.1	825.7	831.9	824.0	828.2	841.3	828.1
105.0	820.7	823.6	803.2	815.6	815.6	821.3	813.5	816.7	830.5	816.9
108.0	805.8	809.0	790.6	802.0	802.1	807.5	800.9	803.9	817.9	805.2
111.0	785.9	790.2	774.4	784.8	786.6	791.9	785.7	787.6	801.7	789.1
114.0	765.6	769.3	756.2	764.6	768.1	772.1	767.3	769.1	782.0	770.6
117.0	743.2	746.1	734.4	743.2	747.8	750.8	746.3	748.2	760.0	750.0
120.0	716.8	719.5	711.2	718.0	724.5	726.5	723.6	724.2	734.7	727.0
123.0	689.4	692.1	685.4	692.5	699.9	700.3	698.8	699.6	708.2	701.1
126.0	658.9	663.0	657.3	663.5	671.6	671.7	670.8	670.9	679.3	671.5
129.0	626.4	630.5	625.7	632.2	640.2	639.1	639.1	639.0	647.9	640.2
132.0	589.0	594.5	591.3	597.9	606.2	605.7	605.4	604.7	613.6	605.7
135.0	549.0	555.8	554.3	560.7	568.6	568.8	569.1	567.3	575.0	568.5
138.0	505.5	512.1	512.5	520.5	529.3	527.4	528.6	528.2	534.1	528.3
141.0	460.1	467.4	467.2	477.2	485.2	483.0	485.5	485.2	490.6	485.9
144.0	412.4	418.1	421.7	429.5	436.8	436.7	439.3	439.9	443.9	439.2
147.0	362.3	368.9	373.6	381.2	387.3	389.5	391.0	390.2	394.9	390.4
150.0	310.6	319.7	326.0	331.9	338.6	339.5	342.3	340.9	344.5	342.1
153.0	259.0	267.4	276.1	280.7	291.5	288.6	292.0	289.4	292.6	294.4
156.0	211.5	218.7	227.8	230.3	239.8	237.8	241.7	239.6	240.3	238.8
159.0	169.7	173.5	181.6	186.4	192.9	193.4	195.3	193.0	197.0	194.8
162.0	128.0	135.6	143.7	147.0	150.0	150.7	154.4	153.2	154.7	151.3
165.0	89.94	94.24	102.2	105.4	112.3	112.2	116.6	115.1	114.5	115.4
168.0	57.50	60.26	65.78	68.50	71.50	72.06	74.49	74.22	73.65	72.35
171.0	33.72	36.74	40.64	42.53	45.03	45.66	46.88	46.93	46.38	45.38
174.0	18.05	19.58	21.69	22.80	24.29	24.72	25.62	25.37	23.53	22.44
177.0	10.16	10.16	9.974	9.993	10.01	10.02	10.05	10.09	10.11	10.11
180.0	10.16	10.16	10.02	10.03	10.03	10.03	10.06	10.09	10.11	10.12
G/C	300.0	315.0	330.0	345.0						
0.0	38.67	38.67	38.67	38.65						
3.0	38.77	39.09	39.83	39.98						
6.0	41.56	42.35	42.31	43.75						
9.0	46.62	49.03	49.43	52.60						
12.0	65.01	69.62	71.59	75.68						
15.0	100.1	104.0	105.1	111.5						
18.0	144.8	145.5	149.5	157.4						
21.0	192.2	195.5	196.5	206.8						
24.0	242.0	245.8	247.9	257.3						
27.0	289.9	292.0	296.1	304.4						
30.0	331.8	335.5	338.4	351.6						
33.0	376.8	383.9	386.2	395.2						
36.0	418.0	425.9	429.0	440.3						
39.0	460.1	465.0	472.3	481.9						
42.0	502.9	506.3	513.8	522.6						
45.0	541.7	545.1	554.3	562.7						
48.0	578.6	583.9	593.9	602.2						
51.0	616.3	622.0	632.5	637.0						
54.0	653.1	652.3	667.0	669.2						
57.0	684.2	678.6	694.4	696.9						
60.0	706.8	702.5	720.4	724.2						
63.0	726.3	725.3	742.9	747.8						
66.0	746.8	745.2	763.2	769.2						

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ARK
Test Date: 09 January 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

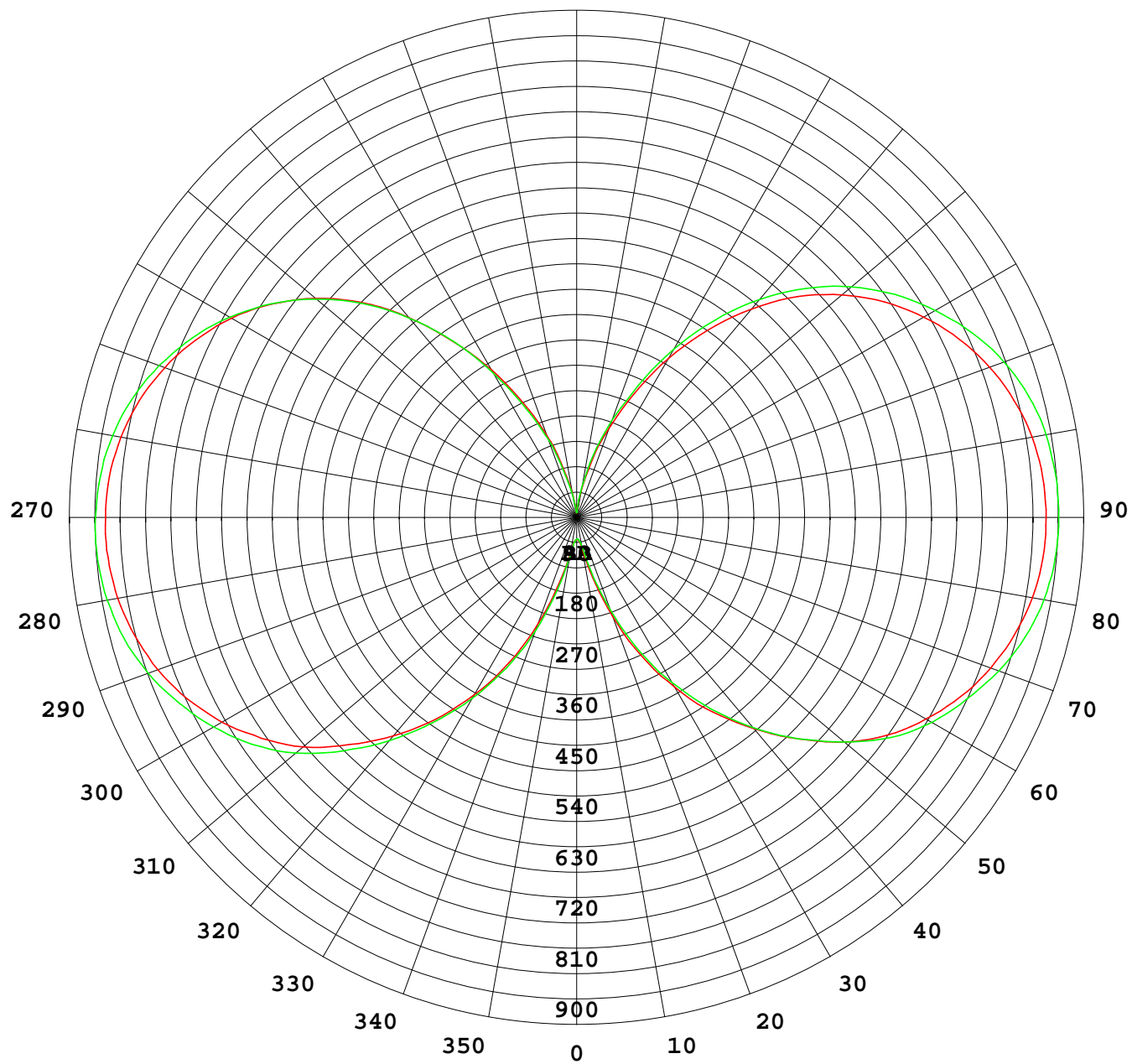
Photometric Data Table [cd]

69.0	765.8	762.7	783.1	786.5
72.0	783.3	777.2	800.7	801.9
75.0	798.4	791.2	813.6	815.1
78.0	809.4	801.4	824.1	826.4
81.0	818.7	810.6	832.4	834.4
84.0	824.1	815.7	837.6	840.1
87.0	827.7	819.8	839.5	842.3
90.0	828.0	820.4	841.6	842.8
93.0	827.3	819.4	840.1	841.8
96.0	824.3	816.1	836.4	837.9
99.0	820.2	810.6	830.7	832.1
102.0	813.3	802.6	822.8	823.9
105.0	802.8	791.5	811.5	812.0
108.0	789.0	777.9	798.3	798.1
111.0	773.5	762.2	781.0	781.2
114.0	755.3	744.3	761.4	761.5
117.0	734.2	723.7	738.4	739.3
120.0	709.8	699.5	713.5	714.8
123.0	684.1	673.2	686.9	688.2
126.0	655.4	644.8	658.2	657.9
129.0	624.4	613.8	625.7	625.4
132.0	591.0	580.1	591.4	588.4
135.0	554.6	543.7	552.4	548.0
138.0	516.1	504.2	508.0	502.9
141.0	472.3	462.1	461.9	455.7
144.0	427.1	416.3	414.6	407.2
147.0	382.1	368.2	366.2	360.1
150.0	333.6	320.4	320.9	311.2
153.0	282.5	274.3	272.7	264.0
156.0	234.0	227.3	226.5	219.3
159.0	191.8	181.2	181.0	179.6
162.0	152.1	143.6	142.9	138.0
165.0	109.2	103.6	99.36	94.56
168.0	70.35	67.21	65.07	61.47
171.0	44.35	41.81	39.22	37.17
174.0	21.41	20.37	19.70	19.29
177.0	10.12	10.15	10.15	10.14
180.0	10.13	10.16	10.16	10.16

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ARK
Test Date: 09 January 2020

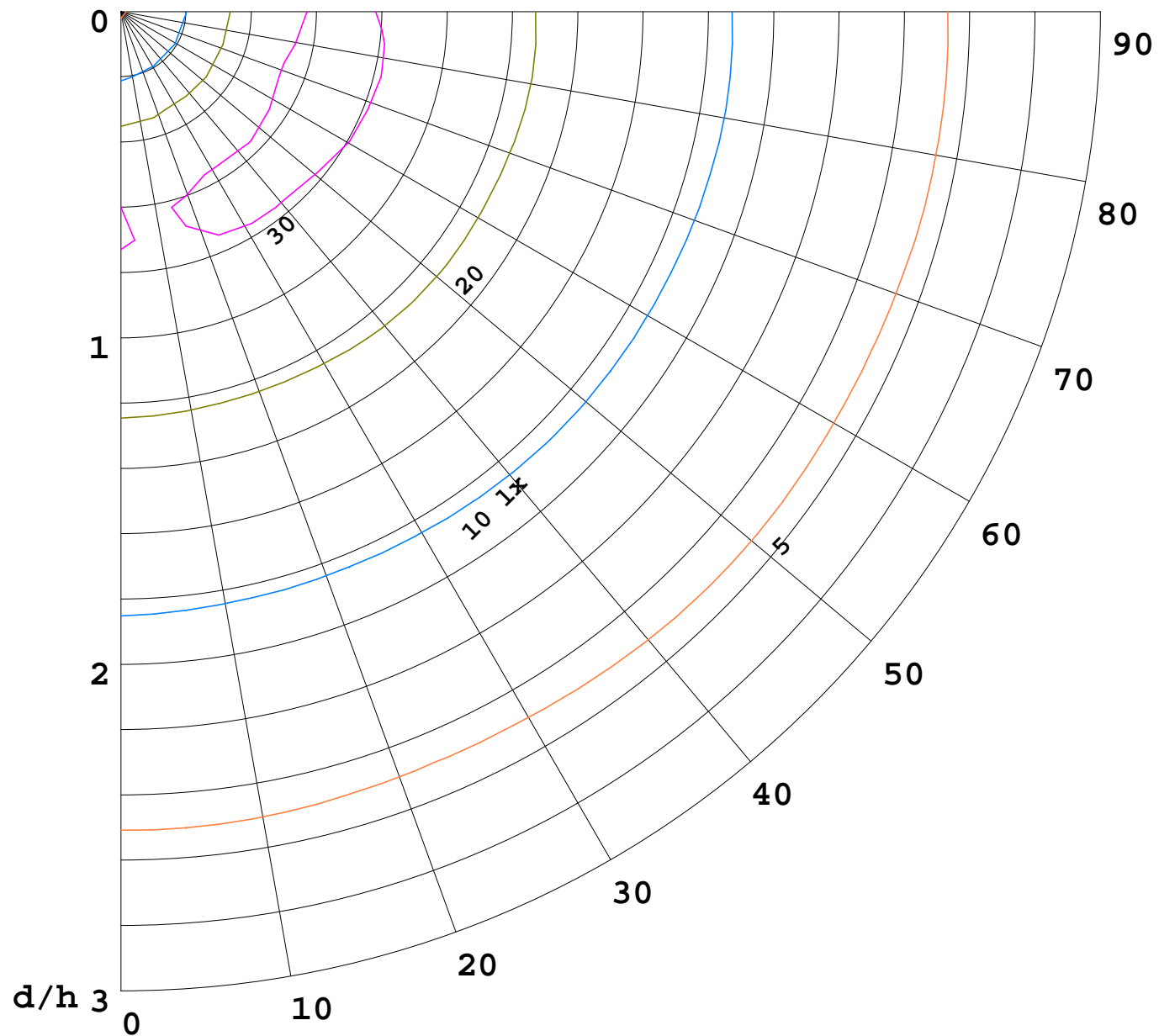
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.351
Humidity: 65.0%
Test Distance: 8.100m [K=1.0000]
Remarks: OB200c-50W-3000K_20200109

I(cd)



1000 lm

$K = 1$



F = 1000 lm
K = 0.7
Hcc = 0.8 m
Hfc = 0.0 m
Eave = 100 lx

	Pcc	Pw	Pfc
—————	70	50	30
—————	50	30	20

