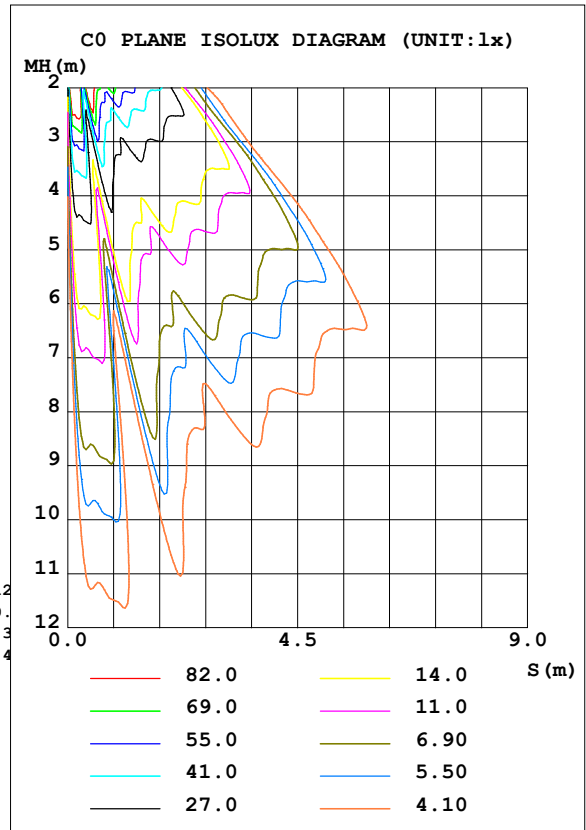
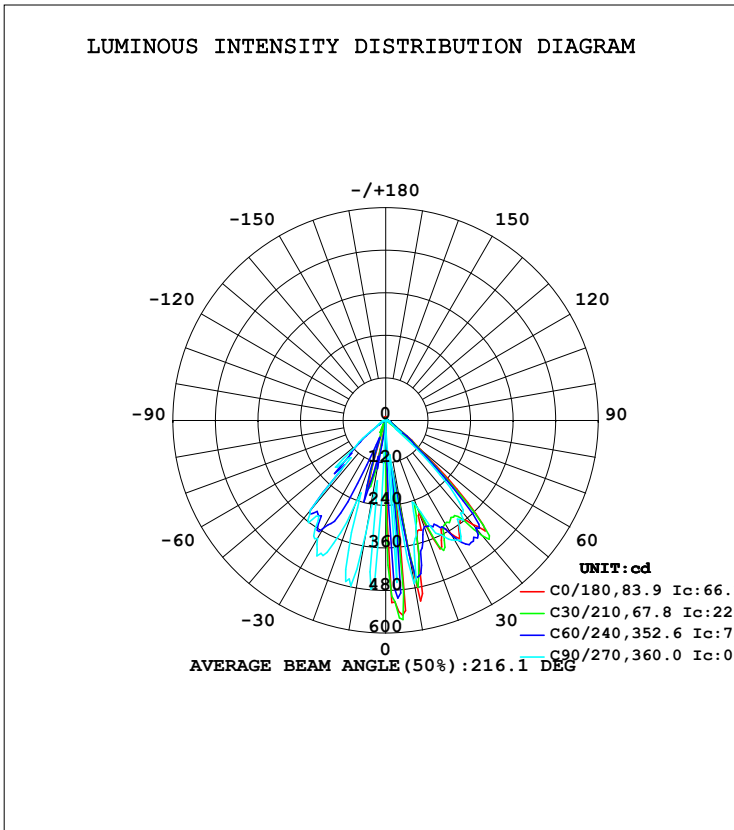


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	VSRW0517L30D1BK	Imax (cd)	563.8	S/MH (C0/180)	0.04
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	0.03
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	586.61	η UP, DN (C0-180)	1.5, 54.4
NOMINAL FLUX (lm)	586.608	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.5, 42.5
LAMPS INSIDE	1	η up (%)	3.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	120.123	η down (%)	97.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Leo
 Test Date: 2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.400m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

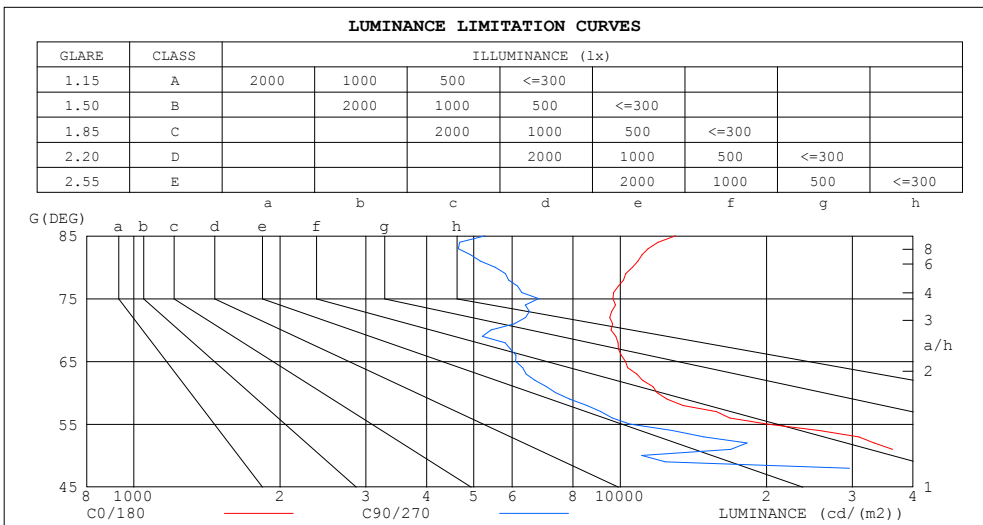
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	355.9	373.7	467.5	83.53	23.44	89.44	323.1	342.7	0- 10	18.72	18.72	3.19,3.19
20	278.7	290.0	263.9	50.67	31.73	50.08	247.1	270.5	10- 20	74.65	93.37	15.9,15.9
30	367.8	355.7	390.0	166.8	10.98	184.4	384.8	227.2	20- 30	119.4	212.8	36.3,36.3
40	383.1	410.6	340.6	120.0	4.119	171.0	331.9	347.3	30- 40	155.5	368.3	62.8,62.8
50	129.8	111.2	35.80	39.05	2.389	49.68	105.6	135.3	40- 50	138.1	506.3	86.3,86.3
60	29.93	28.34	18.52	9.861	1.519	9.870	23.21	28.40	50- 60	36.38	542.7	92.5,92.5
70	16.46	14.76	9.328	6.091	0.9873	5.499	12.42	16.39	60- 70	13.69	556.4	94.8,94.8
80	9.249	7.800	4.826	2.685	0.6493	2.851	6.597	9.250	70- 80	8.609	565.0	96.3,96.3
90	4.359	3.575	1.913	1.298	0.5439	1.258	2.311	4.010	80- 90	3.824	568.8	97,97
100	3.361	2.973	1.881	1.539	0.8706	1.329	1.972	3.254	90-100	2.517	571.3	97.4,97.4
110	2.593	2.648	2.140	1.940	1.261	1.678	2.016	2.947	100-110	2.297	573.6	97.8,97.8
120	2.369	2.717	2.515	2.531	1.899	2.203	2.363	3.037	110-120	2.319	575.9	98.2,98.2
130	2.504	2.881	2.781	3.129	2.549	2.817	2.807	3.283	120-130	2.417	578.4	98.6,98.6
140	2.674	3.042	3.189	3.594	3.348	3.430	2.954	3.570	130-140	2.403	580.8	99,99
150	3.195	3.571	3.351	4.108	3.792	3.943	3.456	4.055	140-150	2.208	583.0	99.4,99.4
160	3.873	4.189	3.899	4.749	4.492	4.535	3.839	4.563	150-160	1.846	584.8	99.7,99.7
170	3.959	4.316	3.800	5.231	11.34	5.303	3.924	4.906	160-170	1.339	586.1	99.9,99.9
180	3.454	3.323	3.557	3.560	3.460	3.317	3.610	3.482	170-180	0.4592	586.6	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12983	5274
80	10601	5532
75	9671	6803
70	9581	5428
65	10260	6101
60	11914	7373
55	20066	10472
50	40191	11084
45	92214	61368

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.235	.133	.042	.227	.129	.041	.212	.122	.039	.199	.115	.037	.187	.108	.035	
2.0	.226	.124	.038	.219	.121	.037	.207	.115	.036	.195	.109	.034	.184	.104	.033	
3.0	.215	.115	.034	.209	.112	.034	.198	.107	.033	.188	.103	.032	.178	.099	.031	
4.0	.204	.106	.031	.199	.104	.031	.189	.100	.030	.180	.097	.029	.171	.093	.028	
5.0	.193	.099	.029	.189	.097	.028	.180	.094	.028	.172	.091	.027	.164	.088	.026	
6.0	.183	.092	.026	.179	.090	.026	.171	.088	.026	.164	.085	.025	.157	.083	.025	
7.0	.174	.086	.024	.170	.085	.024	.163	.082	.024	.156	.080	.023	.150	.078	.023	
8.0	.165	.081	.023	.161	.080	.022	.155	.077	.022	.149	.075	.022	.143	.073	.021	
9.0	.157	.076	.021	.154	.075	.021	.148	.073	.021	.142	.071	.020	.137	.070	.020	
10.0	.149	.071	.020	.146	.071	.020	.141	.069	.019	.136	.067	.019	.131	.066	.019	

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.214	.214	.214	.183	.183	.183	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.198	.180	.164	.170	.155	.141	.116	.106	.097	.067	.062	.057	.021	.020	.018	
2.0	.187	.156	.129	.160	.134	.112	.110	.093	.078	.063	.054	.046	.020	.017	.015	
3.0	.178	.138	.106	.152	.119	.092	.105	.082	.064	.060	.048	.038	.019	.016	.012	
4.0	.169	.124	.089	.145	.107	.077	.100	.074	.054	.058	.044	.032	.019	.014	.011	
5.0	.162	.113	.076	.139	.098	.066	.096	.068	.047	.056	.040	.028	.018	.013	.009	
6.0	.156	.104	.067	.134	.090	.059	.092	.063	.042	.054	.037	.025	.017	.012	.008	
7.0	.150	.097	.061	.129	.084	.053	.089	.059	.037	.052	.035	.022	.017	.011	.007	
8.0	.144	.092	.055	.124	.079	.048	.086	.056	.034	.050	.033	.020	.016	.011	.007	
9.0	.139	.087	.051	.120	.075	.045	.083	.053	.032	.048	.031	.019	.016	.010	.006	
10.0	.134	.083	.048	.116	.072	.042	.080	.050	.030	.047	.030	.018	.015	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm										
NAME: Outdoor lighting					TYPE:COB			WEIGHT:		
SPEC.:3000K					DIM.:			SERIAL No.:2020031901		
MFR.: EVERFINE					SUR.:3.14*0.04*0.04			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	28.0	29.3	28.3	29.5	29.8	27.1	28.4	27.4	28.6	28.8
3H	28.0	29.1	28.3	29.4	29.7	27.0	28.1	27.3	28.4	28.7
4H	28.0	29.0	28.3	29.3	29.6	27.0	28.0	27.3	28.3	28.6
6H	28.0	29.0	28.3	29.3	29.6	26.9	27.9	27.3	28.2	28.6
8H	28.0	28.9	28.4	29.3	29.6	26.9	27.8	27.3	28.2	28.5
12H	28.0	28.9	28.4	29.2	29.6	26.8	27.8	27.2	28.1	28.5
4H 2H	27.8	28.9	28.2	29.2	29.5	26.9	28.0	27.3	28.3	28.6
3H	27.8	28.7	28.2	29.1	29.4	26.9	27.8	27.2	28.1	28.5
4H	27.9	28.7	28.3	29.1	29.4	26.9	27.7	27.3	28.1	28.4
6H	28.0	28.7	28.4	29.1	29.5	26.9	27.6	27.3	28.0	28.4
8H	28.0	28.7	28.4	29.1	29.5	26.9	27.5	27.3	28.0	28.4
12H	28.0	28.7	28.5	29.1	29.6	26.8	27.5	27.3	27.9	28.4
8H 4H	27.8	28.5	28.2	28.9	29.3	26.8	27.5	27.3	27.9	28.4
6H	27.9	28.5	28.4	28.9	29.4	26.9	27.4	27.4	27.9	28.4
8H	28.0	28.5	28.5	29.0	29.5	26.9	27.4	27.4	27.9	28.4
12H	28.1	28.6	28.7	29.1	29.6	26.9	27.3	27.4	27.8	28.4
12H 4H	27.8	28.4	28.2	28.8	29.3	26.8	27.4	27.3	27.8	28.3
6H	27.9	28.4	28.4	28.9	29.4	26.9	27.4	27.4	27.8	28.4
8H	28.0	28.4	28.6	28.9	29.5	26.9	27.3	27.4	27.8	28.4
Variations with the observer position at spacings:										
S = 1.0H	+ 3.5 / - 3.7					+ 3.4 / - 5.3				
1.5H	+ 2.3 / - 4.4					+ 2.7 / - 4.9				
2.0H	+ 5.8 / - 3.5					+ 5.1 / - 4.0				

CIE Pub.117, 586.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.9)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

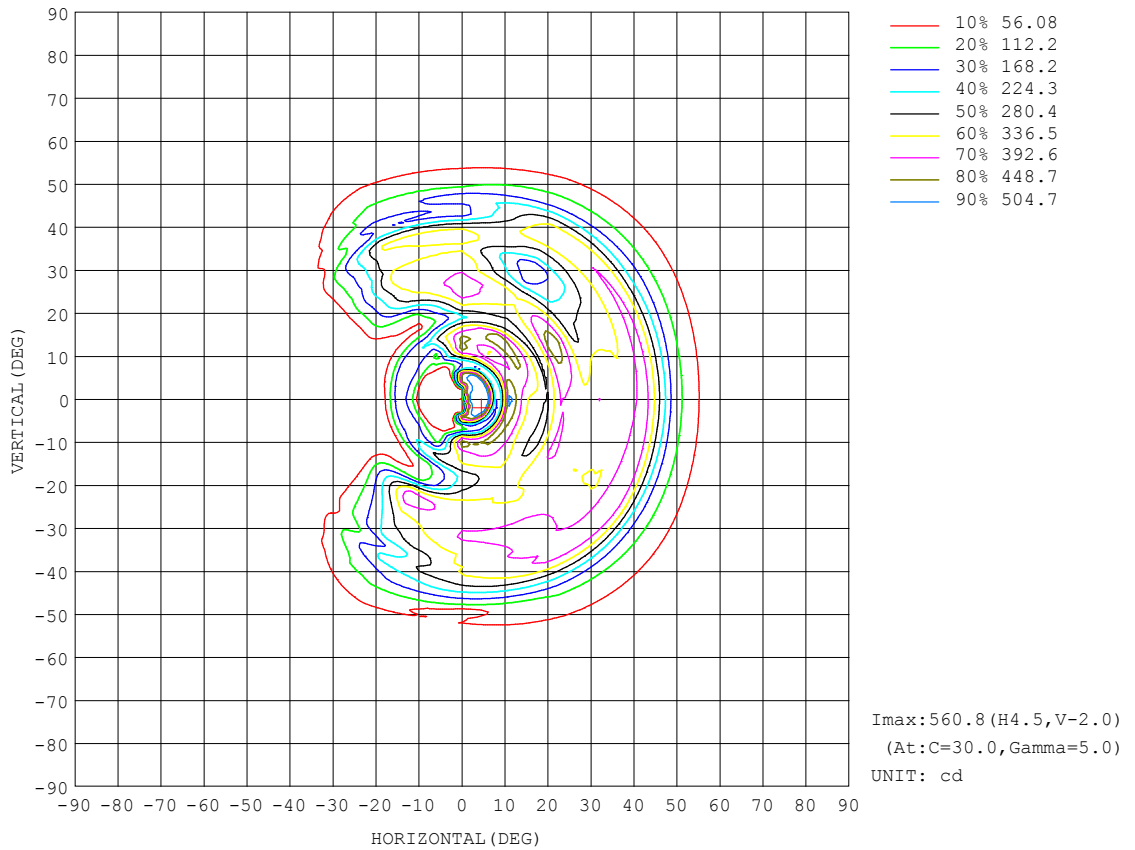
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	68	58	53	67	58	53	66	58	52	47
0.80	78	69	63	77	68	63	75	67	62	57
1.00	86	77	72	85	77	71	83	77	71	65
1.25	92	84	79	91	83	78	88	82	77	71
1.50	96	89	84	95	88	83	92	86	82	75
2.00	101	95	90	100	94	89	96	91	88	81
2.50	104	98	94	102	97	93	98	94	91	83
3.00	106	101	97	104	100	96	100	96	93	85
4.00	109	105	101	107	103	100	102	99	97	88
5.00	111	107	104	108	105	102	103	101	99	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

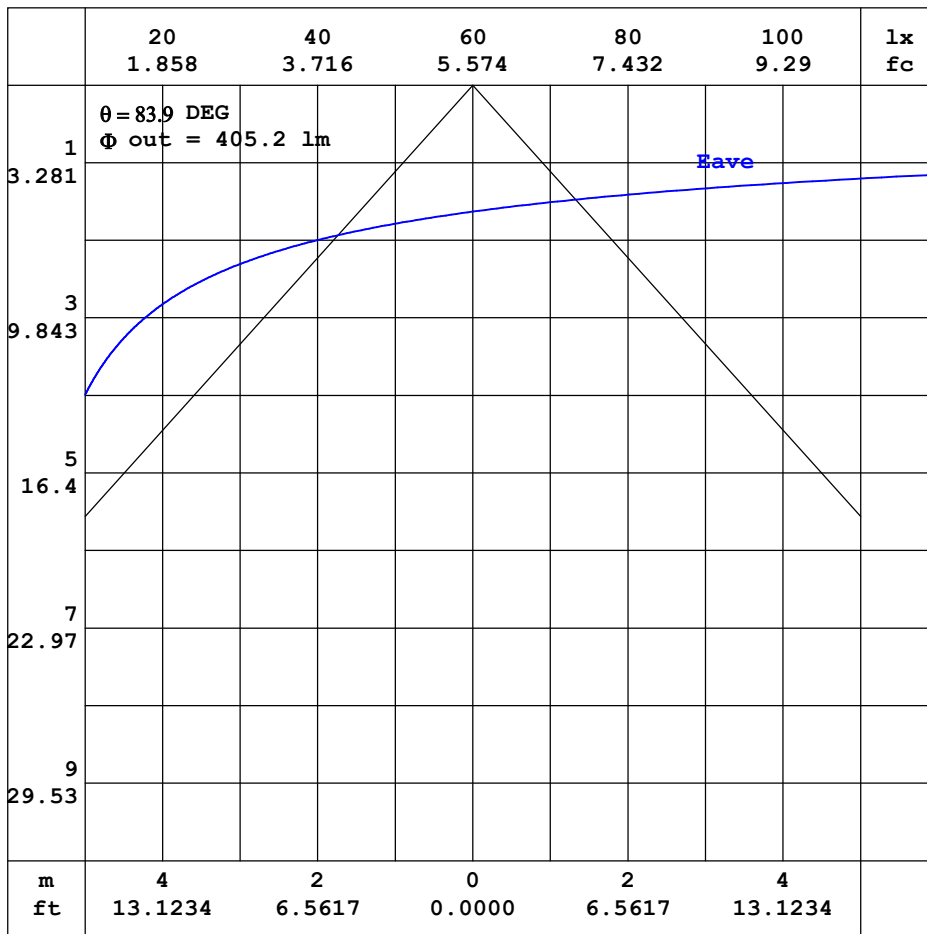


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

AAI CURVES

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

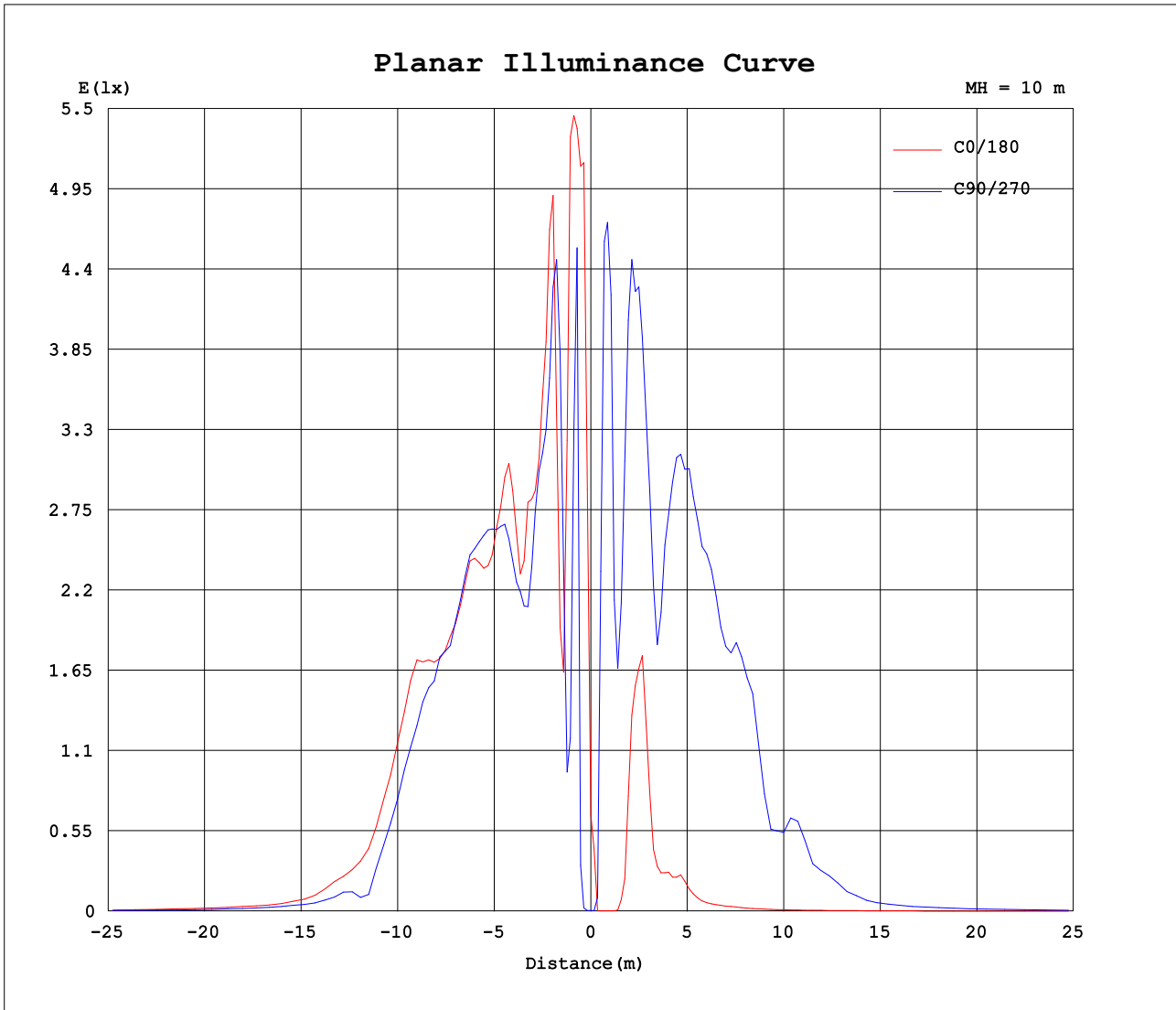


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Leo
 Test Date: 2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.400m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.3V I:0.1522A P:18.04W PF:0.9846 Freq:59.98Hz Lamp Flux:586.608x1 lm		
NAME: Outdoor lighting	TYPE:COB	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:2020031901
MFR.: EVERFINE	SUR.:3.14*0.04*0.04	Shielding Angle:

Table--1 UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	66.1	221	7.38	0.48	43.4	62.2	66.1	221	7.38	0.48	43.4	62.2							
5	551	564	489	333	0.79	0.40	0.27	0.36	2.52	478	545	541							
10	356	360	387	468	79.8	87.3	23.4	40.5	138	323	366	320							
15	344	340	381	335	259	170	195	204	238	436	452	464							
20	279	260	320	264	67.3	34.1	31.7	47.3	52.9	247	267	274							
25	372	395	323	354	427	39.0	33.5	38.0	253	421	337	488							
30	368	336	375	390	320	14.0	11.0	19.5	349	385	196	259							
35	359	334	420	362	260	10.0	6.49	11.2	329	330	131	318							
40	383	426	395	341	233	6.87	4.12	7.98	334	332	334	361							
45	328	303	270	218	155	5.45	2.98	6.04	171	153	329	310							
50	130	118	105	35.8	73.6	4.51	2.39	5.19	94.2	106	135	136							
55	57.8	54.2	48.9	30.2	27.9	3.74	1.92	4.47	31.1	39.5	58.5	62.4							
60	29.9	30.5	26.2	18.5	16.7	3.04	1.52	3.75	16.0	23.2	27.7	29.1							
65	21.8	20.1	17.5	13.0	13.7	2.40	1.21	2.84	10.7	17.4	19.5	21.2							
70	16.5	15.9	13.6	9.33	10.2	1.94	0.99	2.33	8.67	12.4	15.5	17.2							
75	12.6	12.5	10.9	8.85	7.32	1.49	0.80	1.74	6.66	10.3	12.7	12.8							
80	9.25	8.62	6.99	4.83	4.20	1.17	0.65	1.32	4.38	6.60	9.10	9.40							
85	5.68	5.00	3.88	2.31	2.11	1.02	0.55	1.01	2.04	3.25	6.21	5.61							
90	4.36	3.93	3.22	1.91	1.64	0.95	0.54	0.93	1.59	2.31	3.71	4.31							
95	3.87	3.54	2.98	1.88	1.81	1.06	0.71	1.03	1.49	2.11	3.21	3.91							
100	3.36	3.15	2.79	1.88	1.86	1.21	0.87	1.15	1.51	1.97	2.95	3.56							
105	2.93	2.82	2.68	2.00	1.97	1.43	1.05	1.30	1.66	1.97	2.80	3.32							
110	2.59	2.64	2.65	2.14	2.19	1.69	1.26	1.54	1.82	2.02	2.74	3.16							
115	2.43	2.58	2.70	2.30	2.48	1.99	1.58	1.83	2.02	2.12	2.78	3.09							
120	2.37	2.59	2.85	2.52	2.75	2.31	1.90	2.12	2.28	2.36	2.92	3.16							
125	2.40	2.60	2.94	2.49	2.99	2.61	2.23	2.45	2.58	2.58	3.08	3.21							
130	2.50	2.64	3.12	2.78	3.29	2.97	2.55	2.73	2.90	2.81	3.29	3.27							
135	2.58	2.73	3.24	3.00	3.41	3.35	3.00	3.05	3.25	2.92	3.49	3.40							
140	2.67	2.81	3.27	3.19	3.62	3.56	3.35	3.31	3.54	2.95	3.60	3.54							
145	2.90	3.07	3.46	3.29	3.94	3.79	3.60	3.58	3.84	3.24	3.77	3.80							
150	3.19	3.35	3.79	3.35	4.21	4.01	3.79	3.82	4.06	3.46	4.02	4.09							
155	3.51	3.62	4.09	3.33	4.38	4.26	4.03	4.02	4.22	3.67	4.25	4.36							
160	3.87	3.91	4.46	3.90	4.73	4.77	4.49	4.48	4.59	3.84	4.52	4.61							
165	4.20	4.19	4.74	4.23	4.85	5.08	5.42	5.02	4.81	4.01	4.85	4.86							
170	3.96	4.18	4.45	3.80	4.80	5.66	11.3	5.79	4.82	3.92	4.84	4.98							
175	3.83	3.62	3.72	3.54	4.13	6.05	10.1	6.54	4.32	3.96	4.28	4.23							
180	3.45	3.33	3.31	3.56	3.54	3.58	3.46	3.33	3.30	3.61	3.51	3.46							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-03-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks: