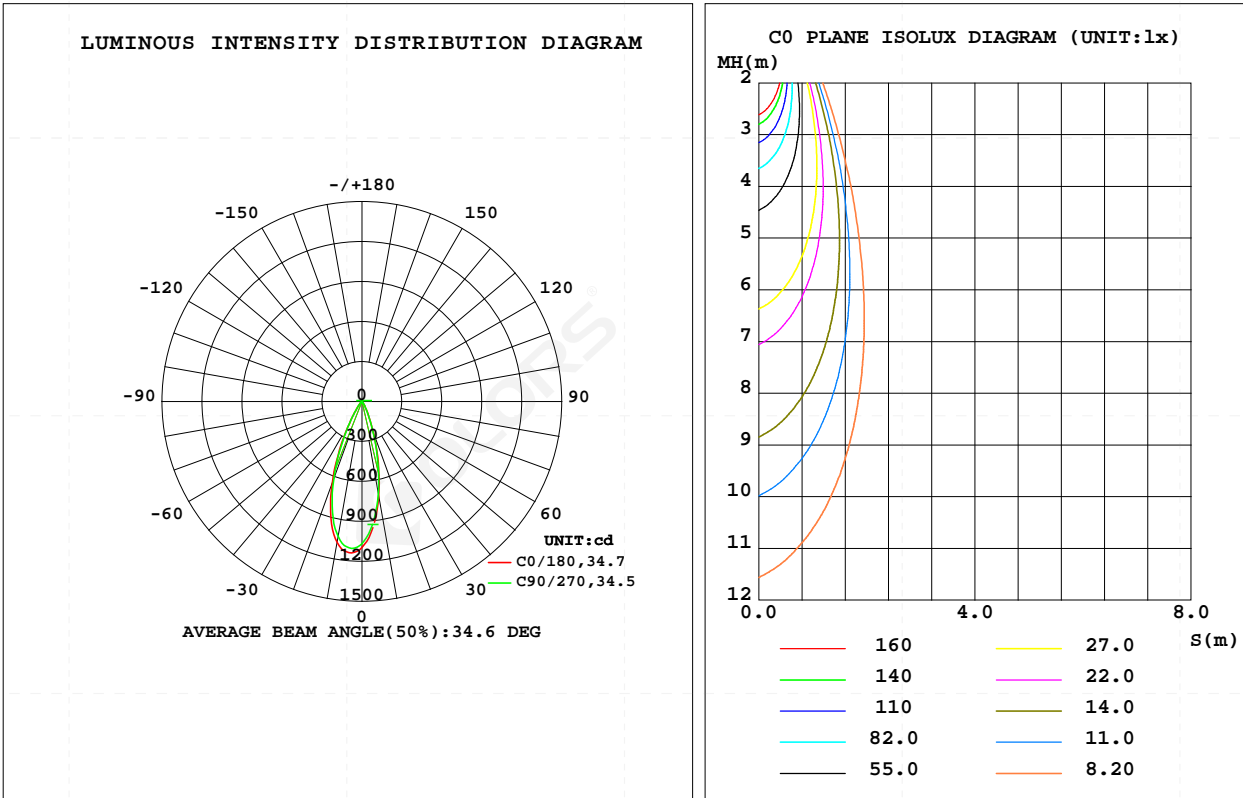


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.1240A P:5.950W PF:1.000 Freq:0Hz Lamp Flux:469.367x1 lm		
NAME: FD-HM40S3642(T)-N938B06	TYPE:	WEIGHT:
SPEC.:	DIM.: 40mm	SERIAL No.:
MFR.: COLORS	SUR.:40mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.89 lm/W			
MODEL		I _{max} (cd)	1176	S/MH(C0/180)	0.45
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.67
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	469.37	h UP,DN(C0-180)	2.0,34.3
NOMINAL FLUX(lm)	469.367	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.3,62.4
LAMPS INSIDE	1	h up(%)	3.3	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	48	h down(%)	96.7	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

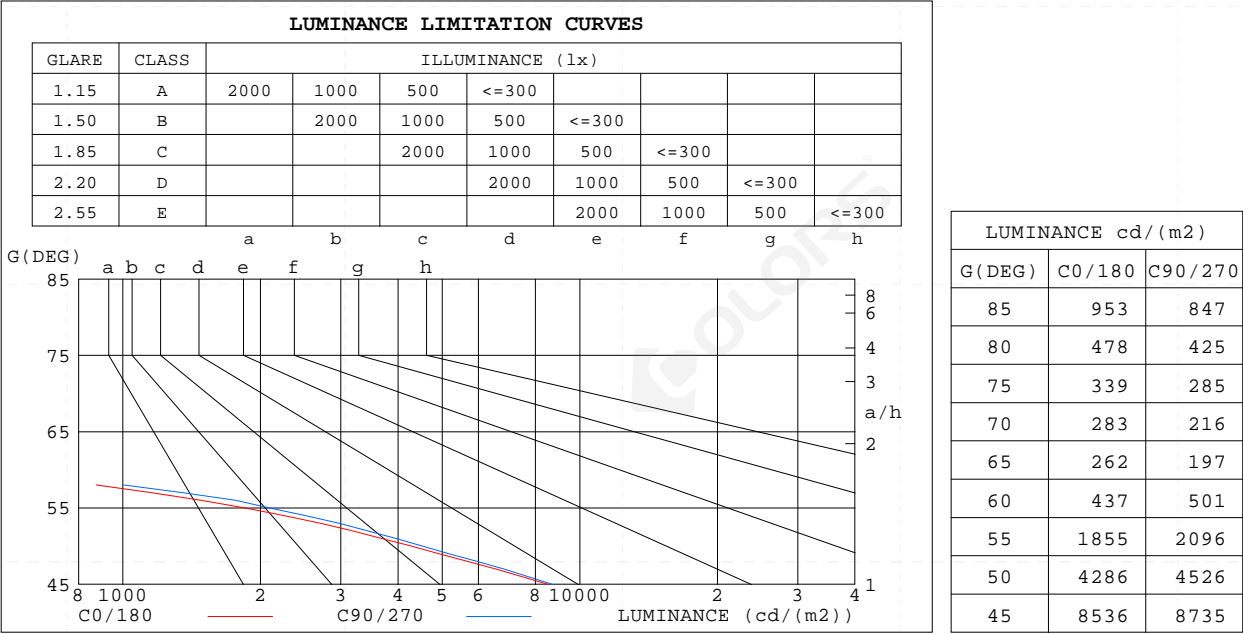
ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	725.5	631.0	704.9	914.7	1076	1153	1030	818.2	0- 10	93.31	93.31	19.9,19.9
20	260.7	194.6	251.9	460.2	658.8	803.8	622.4	357.1	10- 20	183.8	277.1	59,59
30	56.95	42.74	55.81	112.7	191.7	292.6	188.7	84.12	20- 30	120.3	397.4	84.7,84.7
40	15.10	11.57	14.98	25.42	38.31	57.16	39.94	20.80	30- 40	39.64	437.1	93.1,93.1
50	3.582	2.570	3.782	8.083	11.87	15.94	12.31	5.963	40- 50	12.00	449.1	95.7,95.7
60	0.2838	0.0839	0.3259	1.847	3.436	4.720	3.284	0.8857	50- 60	3.900	453.0	96.5,96.5
70	0.1259	0.0899	0.0959	0.0959	0.2504	0.6601	0.1859	0.1379	60- 70	0.7912	453.8	96.7,96.7
80	0.1079	0.1079	0.0959	0.1020	0.1199	0.1259	0.1259	0.1020	70- 80	0.1337	453.9	96.7,96.7
90	0.1079	0.1559	0.1019	0.1199	0.1319	0.1199	0.1320	0.0959	80- 90	0.1262	454.0	96.7,96.7
100	0.1739	0.2459	0.1739	0.1859	0.1619	0.1199	0.1560	0.1199	90-100	0.1567	454.2	96.8,96.8
110	0.3298	0.4505	0.3590	0.2938	0.2100	0.1620	0.2100	0.2037	100-110	0.2288	454.4	96.8,96.8
120	0.8808	1.207	0.9278	0.5943	0.3660	0.2638	0.3720	0.4434	110-120	0.4087	454.8	96.9,96.9
130	2.846	3.518	2.853	1.718	0.9001	0.6590	0.8819	1.431	120-130	1.019	455.8	97.1,97.1
140	6.172	7.042	6.226	4.452	2.503	1.961	2.442	3.615	130-140	2.283	458.1	97.6,97.6
150	9.173	9.817	9.358	7.935	5.448	4.694	5.342	6.786	140-150	3.618	461.7	98.4,98.4
160	9.972	10.13	10.54	10.29	8.625	8.021	8.528	9.270	150-160	3.903	465.6	99.2,99.2
170	9.409	9.720	10.28	10.45	9.966	10.02	10.13	9.924	160-170	2.769	468.4	99.8,99.8
180	9.960	10.43	10.36	10.39	10.00	10.46	10.36	10.37	170-180	0.9627	469.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

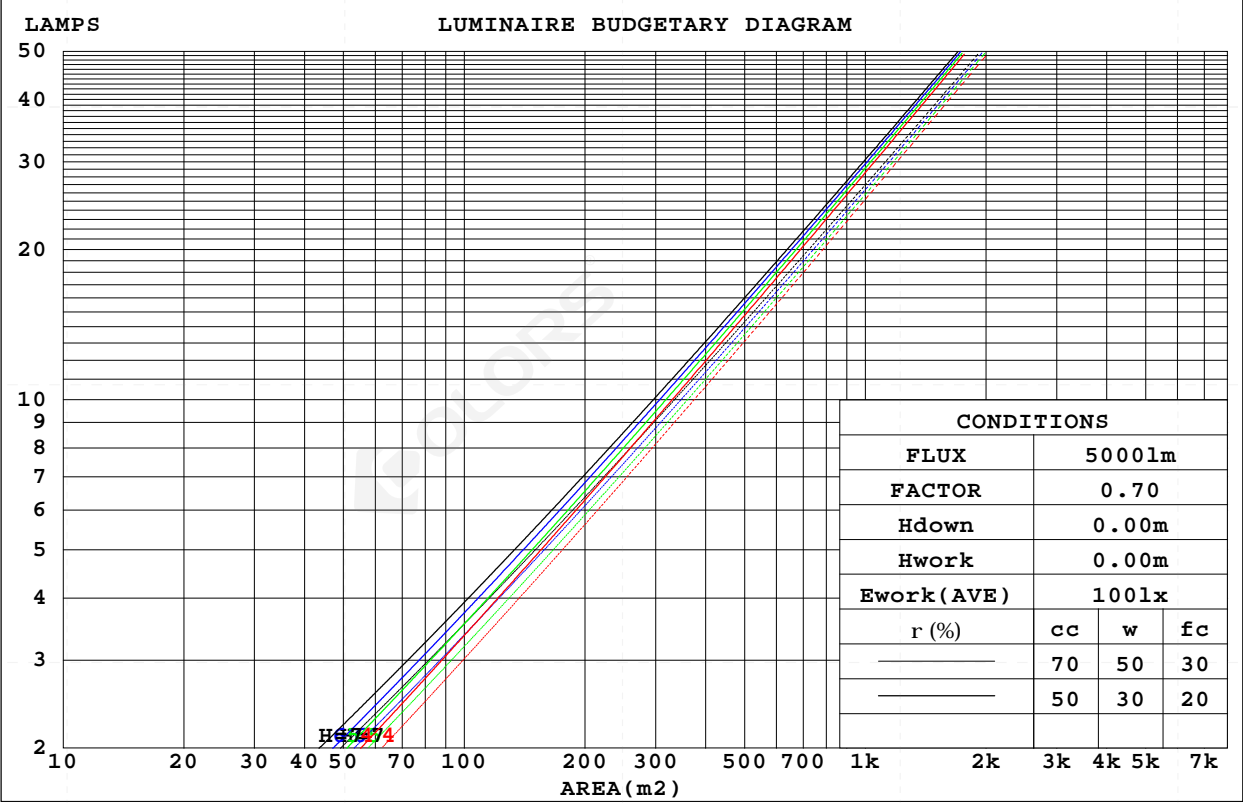


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.11	1.09	1.07	1.08	1.07	1.05	1.04	1.02	1.01	.00	.98	.97	.96	.95	.94	.92
2.0	1.04	1.01	.98	1.02	.99	.97	.99	.96	.94	.95	.93	.92	.92	.91	.89	.87
3.0	.99	.94	.91	.97	.93	.90	.94	.91	.88	.91	.89	.86	.89	.87	.85	.83
4.0	.93	.89	.85	.92	.88	.84	.90	.86	.83	.87	.84	.82	.85	.83	.81	.79
5.0	.89	.84	.80	.88	.83	.80	.86	.82	.79	.84	.80	.78	.82	.79	.77	.75
6.0	.85	.80	.76	.84	.79	.76	.82	.78	.75	.80	.77	.74	.79	.76	.73	.72
7.0	.81	.76	.72	.80	.75	.72	.78	.74	.71	.77	.73	.71	.76	.73	.70	.69
8.0	.77	.72	.69	.77	.72	.68	.75	.71	.68	.74	.70	.68	.73	.70	.67	.66
9.0	.74	.69	.66	.73	.69	.65	.72	.68	.65	.71	.67	.65	.70	.67	.64	.63
10.0	.71	.66	.63	.71	.66	.63	.70	.65	.62	.69	.65	.62	.68	.64	.62	.61



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

WEC AND CCEC

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.159	.090	.029	.151	.086	.027	.137	.079	.025	.124	.071	.023	.112	.065	.021	
2.0	.150	.082	.025	.143	.079	.024	.131	.073	.023	.120	.067	.021	.110	.062	.020	
3.0	.141	.075	.023	.136	.073	.022	.125	.068	.021	.116	.063	.019	.107	.059	.018	
4.0	.134	.069	.020	.129	.067	.020	.120	.064	.019	.111	.060	.018	.104	.056	.017	
5.0	.127	.065	.019	.123	.063	.018	.115	.060	.018	.107	.057	.017	.100	.054	.016	
6.0	.120	.060	.017	.117	.059	.017	.110	.056	.016	.103	.054	.016	.097	.051	.015	
7.0	.115	.057	.016	.112	.056	.016	.105	.053	.015	.100	.051	.015	.094	.049	.014	
8.0	.110	.054	.015	.107	.053	.015	.101	.051	.014	.096	.049	.014	.091	.047	.014	
9.0	.105	.051	.014	.102	.050	.014	.097	.048	.014	.093	.046	.013	.088	.045	.013	
10.0	.101	.048	.013	.098	.048	.013	.094	.046	.013	.090	.045	.013	.086	.043	.012	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.215	.215	.215	.184	.184	.184	.126	.126	.126	.072	.072	.072	.023	.023	.023	
1.0	.195	.183	.171	.167	.157	.148	.114	.108	.102	.066	.062	.059	.021	.020	.019	
2.0	.179	.158	.140	.153	.136	.121	.105	.094	.085	.060	.055	.050	.019	.018	.016	
3.0	.165	.139	.118	.142	.120	.102	.097	.083	.072	.056	.049	.042	.018	.016	.014	
4.0	.154	.124	.101	.132	.107	.088	.091	.075	.062	.053	.044	.037	.017	.014	.012	
5.0	.144	.112	.088	.124	.097	.077	.085	.068	.054	.050	.040	.032	.016	.013	.011	
6.0	.136	.103	.078	.117	.089	.068	.081	.062	.048	.047	.037	.029	.015	.012	.009	
7.0	.129	.095	.070	.111	.082	.061	.077	.058	.043	.045	.034	.026	.014	.011	.009	
8.0	.123	.088	.064	.106	.077	.056	.074	.054	.040	.043	.032	.024	.014	.010	.008	
9.0	.118	.083	.059	.102	.072	.052	.071	.051	.037	.041	.030	.022	.013	.010	.007	
10.0	.114	.078	.055	.098	.068	.048	.068	.048	.034	.040	.028	.020	.013	.009	.007	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2024-04-22

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.375m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

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	11.7	12.4	11.9	12.6	12.9	11.7	12.4	11.9	12.6	12.9
3H	11.5	12.2	11.8	12.4	12.7	11.5	12.2	11.8	12.5	12.7
4H	11.4	12.1	11.7	12.3	12.6	11.4	12.1	11.7	12.3	12.6
6H	11.3	12.0	11.7	12.2	12.5	11.3	12.0	11.7	12.2	12.5
8H	11.3	11.9	11.6	12.2	12.5	11.3	11.9	11.6	12.2	12.5
12H	11.2	11.8	11.6	12.2	12.5	11.2	11.8	11.6	12.1	12.5
4H 2H	11.4	12.1	11.7	12.3	12.6	11.4	12.1	11.7	12.3	12.6
3H	11.2	11.8	11.6	12.1	12.5	11.2	11.8	11.6	12.1	12.5
4H	11.1	11.7	11.5	12.0	12.4	11.1	11.7	11.5	12.0	12.4
6H	11.0	11.5	11.5	11.9	12.3	11.0	11.5	11.4	11.9	12.3
8H	11.0	11.4	11.4	11.8	12.3	11.0	11.4	11.4	11.8	12.3
12H	11.0	11.4	11.4	11.8	12.2	10.9	11.3	11.4	11.8	12.2
8H 4H	11.0	11.4	11.4	11.8	12.2	11.0	11.4	11.4	11.8	12.2
6H	10.9	11.2	11.3	11.7	12.2	10.9	11.2	11.3	11.7	12.2
8H	10.8	11.2	11.3	11.6	12.1	10.8	11.1	11.3	11.6	12.1
12H	10.8	11.1	11.3	11.6	12.1	10.8	11.1	11.3	11.6	12.1
12H 4H	10.9	11.3	11.4	11.7	12.2	10.9	11.3	11.4	11.7	12.2
6H	10.8	11.1	11.3	11.6	12.1	10.8	11.1	11.3	11.6	12.1
8H	10.8	11.1	11.3	11.6	12.1	10.8	11.1	11.3	11.5	12.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.6 / -10.7					+ 3.5 / -10.7				
1.5H	+ 5.3 / - 9.7					+ 5.2 / - 9.6				
2.0H	+ 6.9 / - 8.3					+ 6.8 / - 8.9				

CIE Pub.117, 469.4 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -2.6$)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JYH
 Test Date: 2024-04-22

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 10.375m [K=1.0000]
 Remarks:

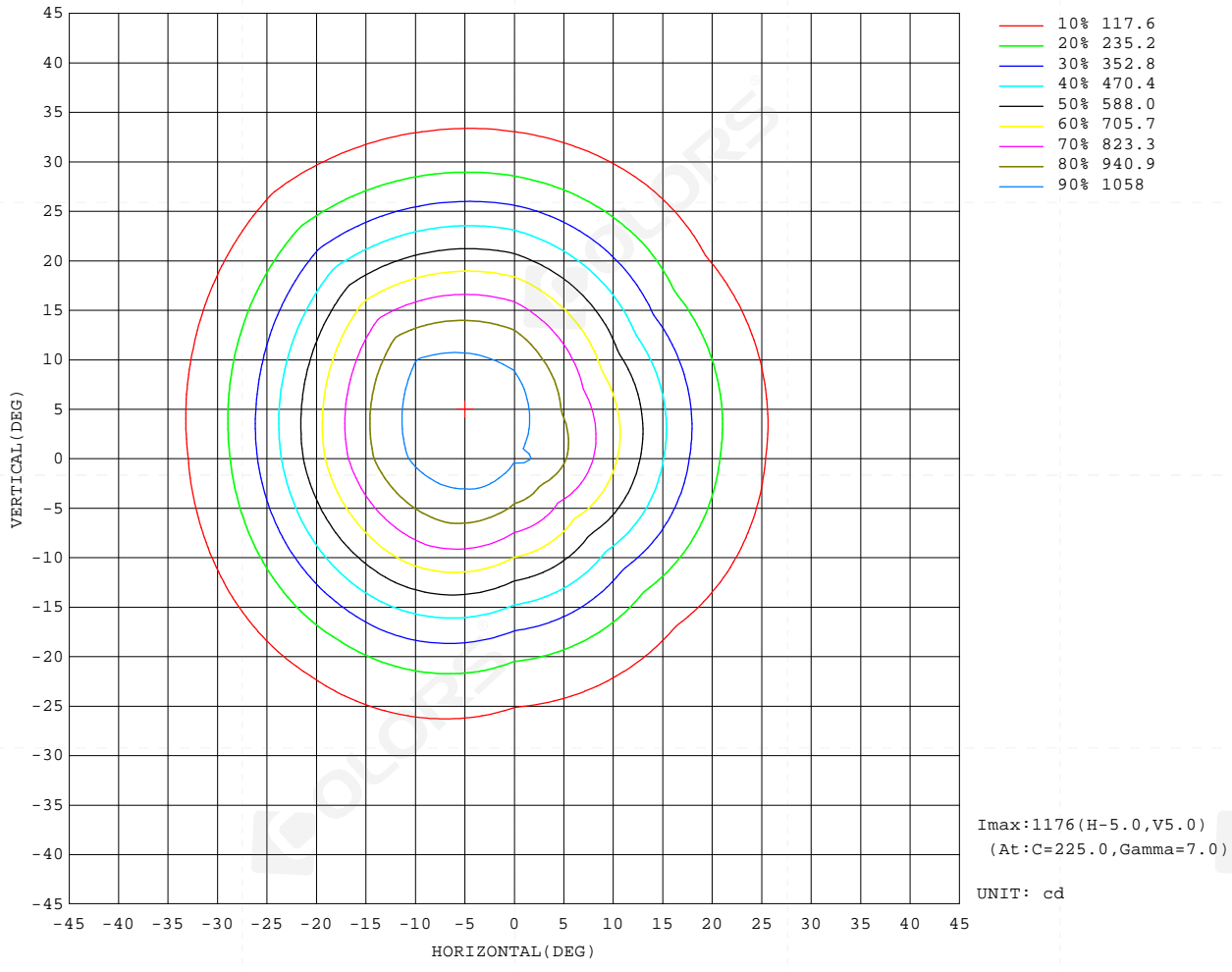
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	88	85	92	88	84	81
1.00	99	93	90	98	93	89	96	92	89	84
1.25	103	98	94	101	97	94	99	95	93	88
1.50	105	101	97	104	100	97	101	98	95	90
2.00	108	104	101	106	103	100	103	100	98	92
2.50	110	106	103	108	104	102	104	101	99	93
3.00	111	108	105	109	106	104	105	103	101	94
4.00	113	110	108	111	108	107	107	105	103	95
5.00	114	112	110	112	110	108	107	106	105	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

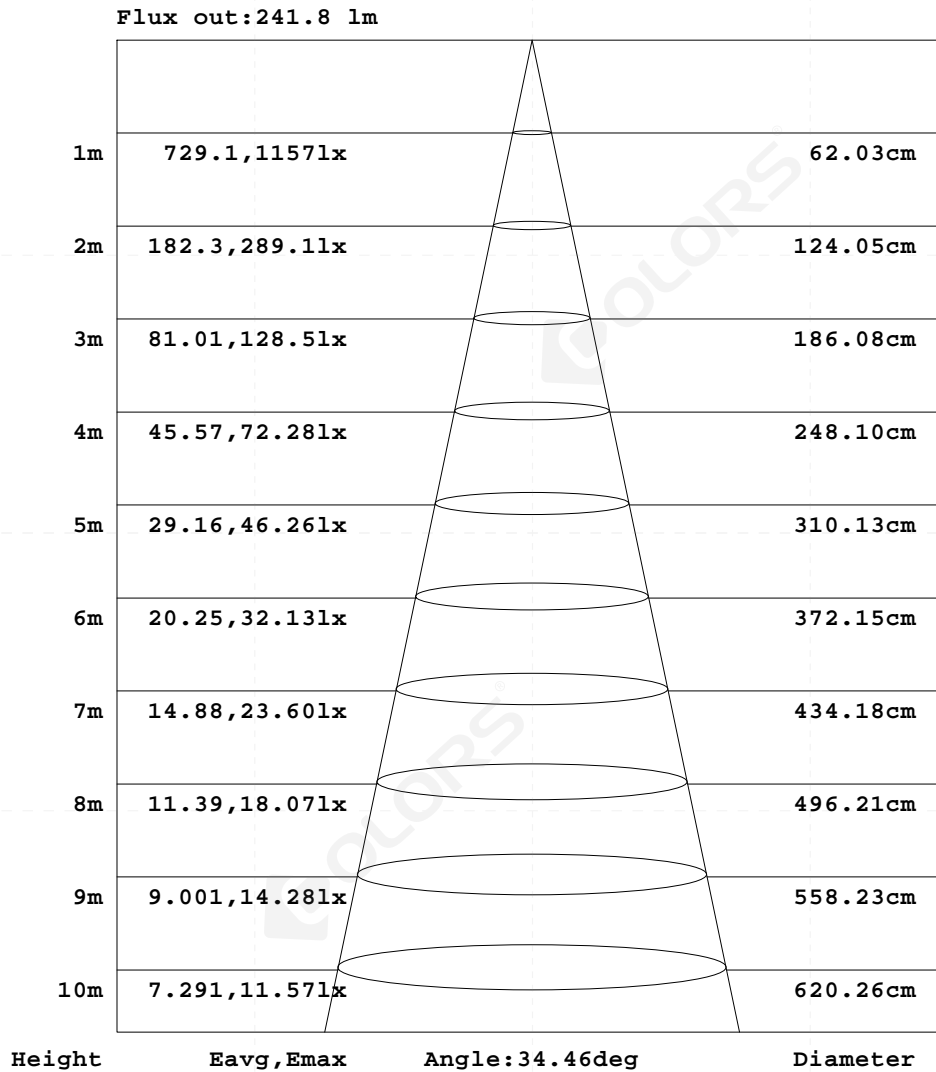
g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	deg Range: 0 - 180DEG
C Interval: 45.0DEG	Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Temperature:25.3DEG	Humidity:65.0%
Operators:JYH	Test Distance:10.375m [K=1.0000]
Test Date:2024-04-22	Remarks:

AAI Figure

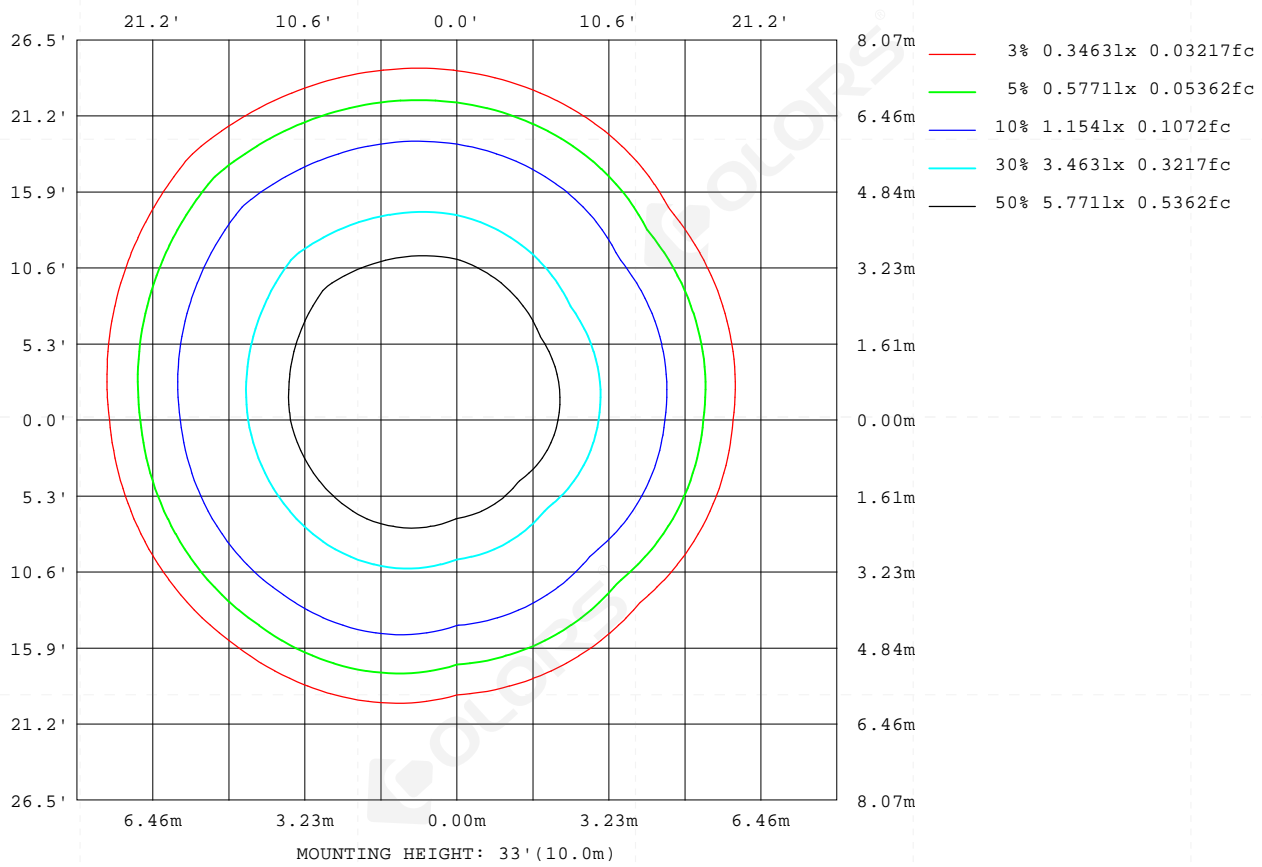


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.375m [K=1.0000]
Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.375m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:48.00V I:0.1240A P:5.950W PF:1.000 Freq:0Hz Lamp Flux:469.367x1 lm		
NAME: TLS-MT20S42(T)-06903836-NBB	TYPE:	WEIGHT:
SPEC.:	DIM.: 40mm	SERIAL No.:
MFR.: COLORS	SUR.:40mm	Shielding Angle:

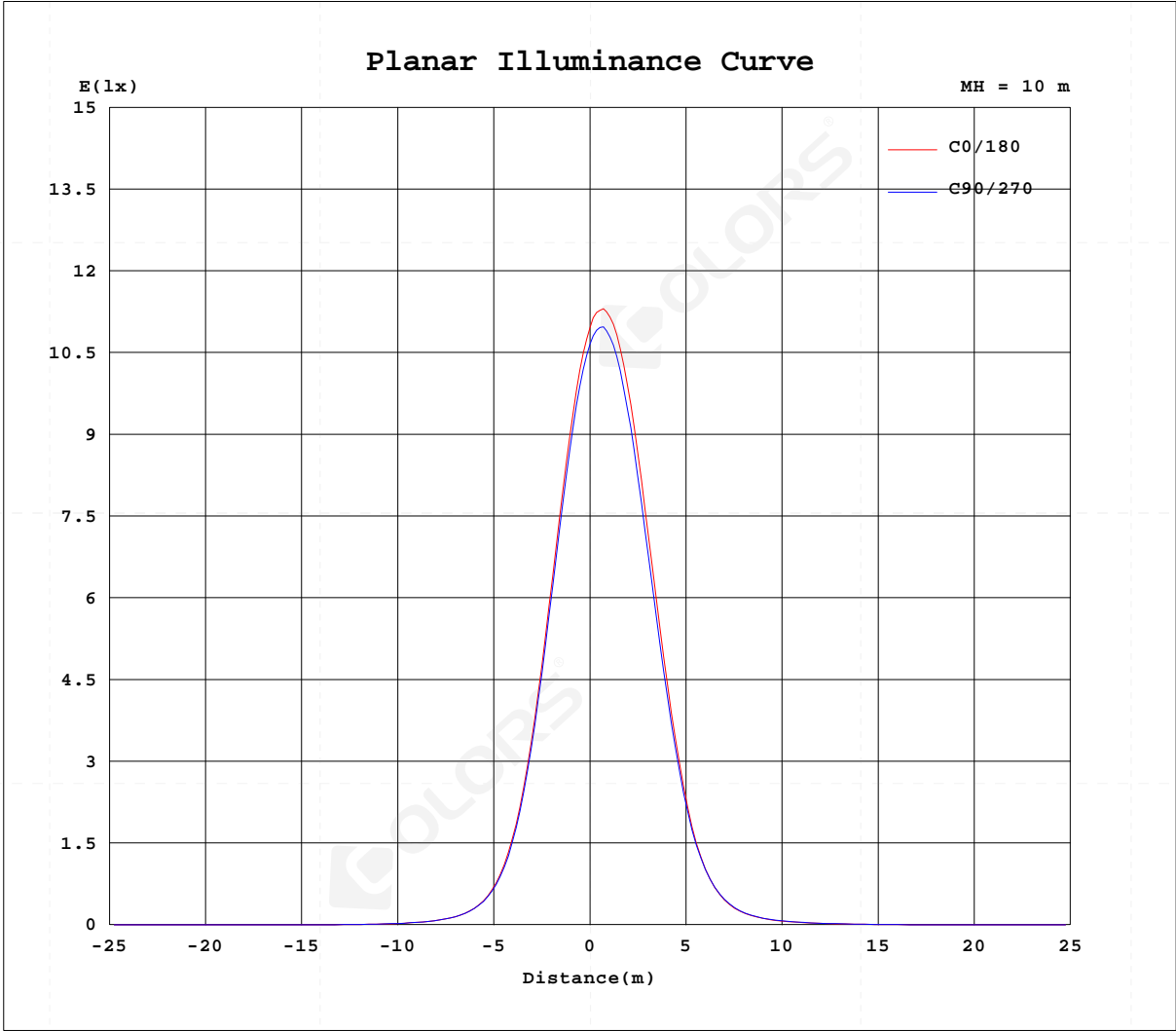
AvgL	cd/m2
L_0~180(65)av	1345
L_0~180(75)av	348
L_0~180(85)av	1058
L_90~270(65)av	1109
L_90~270(75)av	321
L_90~270(85)av	979
L_45(65)av	1310
L_45(75)av	343
L_45(85)av	1032

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-04-22

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.375m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	1096	1078	1066	1069	1096	1078	1066	1069										
5	952	886	926	1043	1138	1170	1103	990										
10	725	631	705	915	1076	1153	1030	818										
15	475	383	460	703	907	1026	860	586										
20	261	195	252	460	659	804	622	357										
25	125	90.8	120	245	399	536	380	183										
30	57.0	42.7	55.8	113	192	293	189	84.1										
35	28.0	21.8	27.9	50.6	83.5	131	85.4	39.5										
40	15.1	11.6	15.0	25.4	38.3	57.2	39.9	20.8										
45	7.85	5.79	8.03	14.3	20.5	28.3	21.4	11.5										
50	3.58	2.57	3.78	8.08	11.9	15.9	12.3	5.96										
55	1.38	0.65	1.56	4.10	6.74	9.10	6.75	2.82										
60	0.28	0.08	0.33	1.85	3.44	4.72	3.28	0.89										
65	0.14	0.09	0.11	0.44	1.33	2.14	1.11	0.20										
70	0.13	0.09	0.10	0.10	0.25	0.66	0.19	0.14										
75	0.11	0.10	0.10	0.10	0.12	0.16	0.12	0.11										
80	0.11	0.11	0.10	0.10	0.12	0.13	0.13	0.10										
85	0.11	0.13	0.10	0.12	0.13	0.12	0.13	0.10										
90	0.11	0.16	0.10	0.12	0.13	0.12	0.13	0.10										
95	0.14	0.19	0.16	0.14	0.14	0.12	0.14	0.10										
100	0.17	0.25	0.17	0.19	0.16	0.12	0.16	0.12										
105	0.27	0.33	0.28	0.23	0.18	0.12	0.17	0.17										
110	0.33	0.45	0.36	0.29	0.21	0.16	0.21	0.20										
115	0.50	0.69	0.53	0.40	0.26	0.18	0.27	0.29										
120	0.88	1.21	0.93	0.59	0.37	0.26	0.37	0.44										
125	1.62	2.16	1.65	0.98	0.55	0.42	0.56	0.80										
130	2.85	3.52	2.85	1.72	0.90	0.66	0.88	1.43										
135	4.41	5.24	4.48	2.92	1.52	1.14	1.49	2.36										
140	6.17	7.04	6.23	4.45	2.50	1.96	2.44	3.61										
145	7.94	8.69	7.93	6.22	3.84	3.16	3.76	5.18										
150	9.17	9.82	9.36	7.94	5.45	4.69	5.34	6.79										
155	9.86	10.3	10.3	9.38	7.15	6.39	7.02	8.23										
160	9.97	10.1	10.5	10.3	8.62	8.02	8.53	9.27										
165	9.71	9.78	10.5	10.5	9.62	9.28	9.60	9.75										
170	9.41	9.72	10.3	10.5	9.97	10.0	10.1	9.92										
175	9.48	10.1	10.2	10.5	10.0	10.4	10.3	10.2										
180	9.96	10.4	10.4	10.4	10.0	10.5	10.4	10.4										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-04-22

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.375m [K=1.0000]
Remarks: