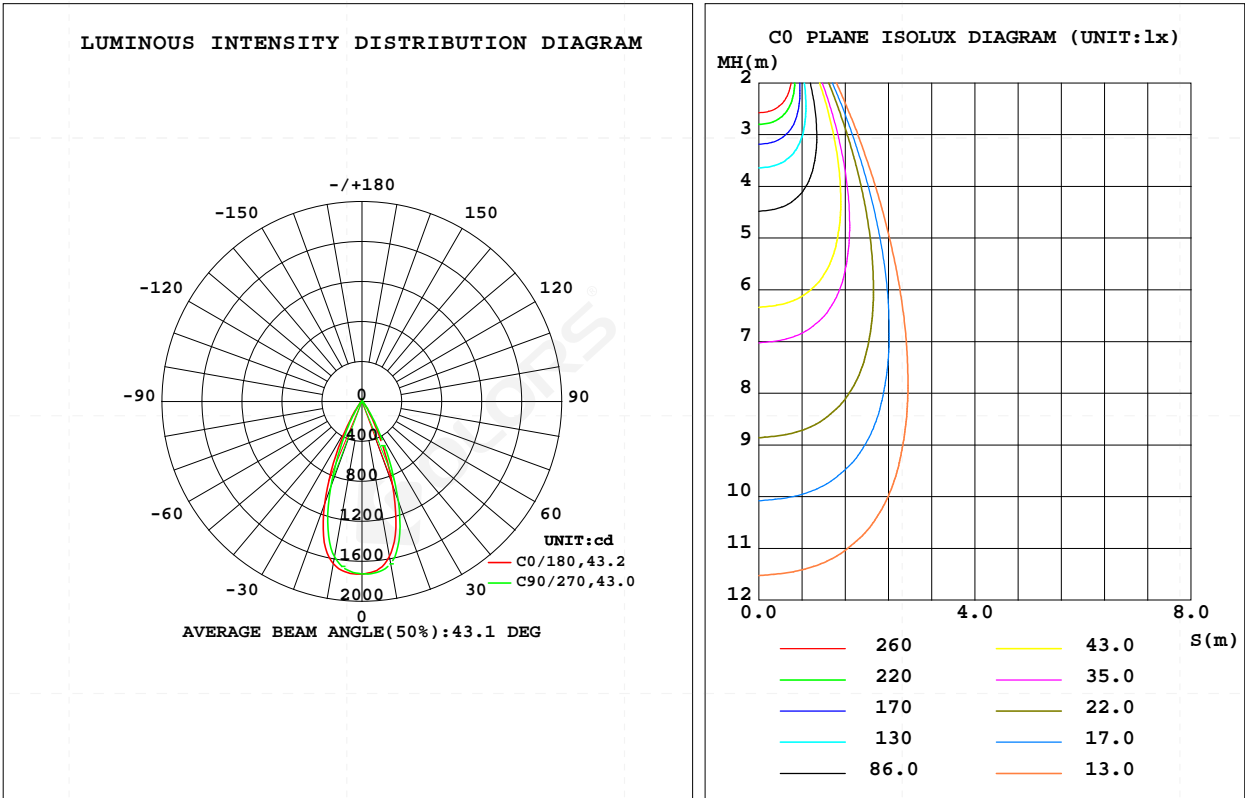


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.2450A P:11.76W PF:1.000 Freq:0Hz Lamp Flux:971.439x1 lm		
NAME: FD-HM40S3852(T)-N950B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 82.61 lm/W			
MODEL		I _{max} (cd)	1728	S/MH(C0/180)	0.63
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.64
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	971.44	h UP,DN(C0-180)	1.9,49.5
NOMINAL FLUX(lm)	971.439	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.6,47.0
LAMPS INSIDE	1	h up(%)	3.5	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	48	h down(%)	96.5	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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

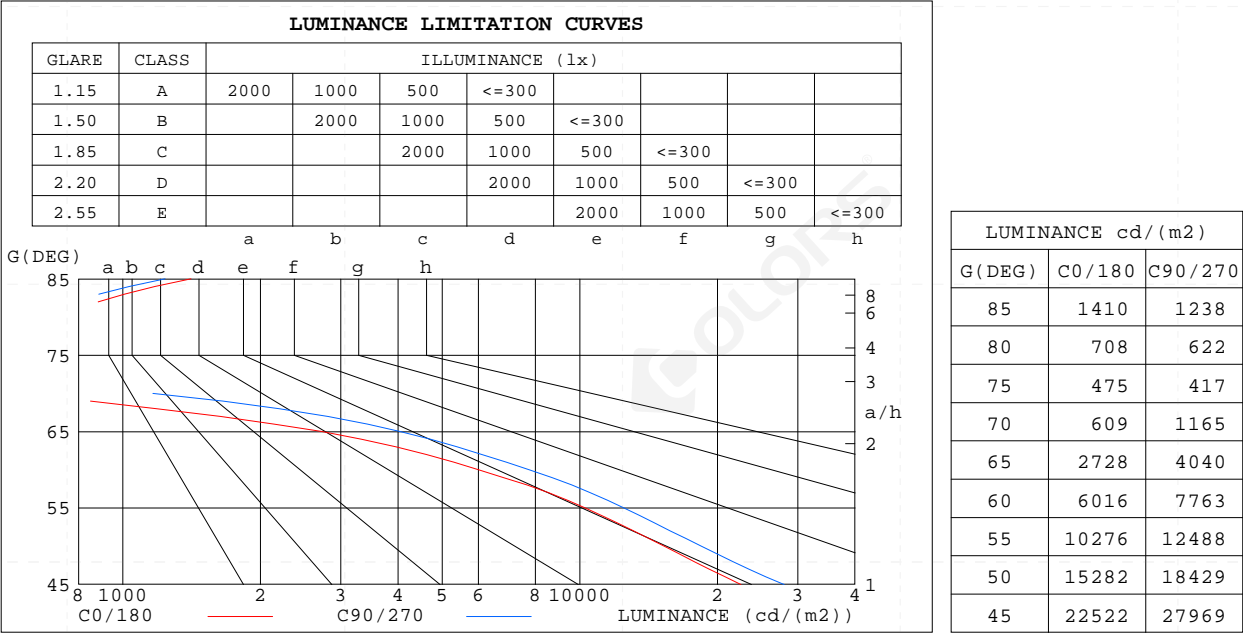
ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1579	1644	1648	1647	1649	1586	1582	1581	0- 10	160.1	160.1	16.5,16.5
20	899.7	1064	1068	1068	1102	928.3	922.0	924.3	10- 20	374.6	534.7	55,55
30	236.0	318.0	322.7	319.8	336.6	248.6	243.4	245.6	20- 30	269.3	804.0	82.8,82.8
40	55.41	71.51	71.91	71.74	73.88	57.33	56.78	56.71	30- 40	88.29	892.3	91.9,91.9
50	19.65	23.60	23.69	23.61	24.01	20.13	19.97	19.94	40- 50	29.25	921.6	94.9,94.9
60	6.016	7.761	7.763	7.774	8.089	6.288	6.257	6.223	50- 60	12.05	933.6	96.1,96.1
70	0.4168	0.7367	0.7966	0.7580	0.9688	0.5416	0.4777	0.5302	60- 70	3.190	936.8	96.4,96.4
80	0.2459	0.2159	0.2159	0.2221	0.2758	0.2818	0.2938	0.2818	70- 80	0.3149	937.1	96.5,96.5
90	0.2578	0.2939	0.2757	0.2938	0.3060	0.2818	0.3178	0.2818	80- 90	0.2917	937.4	96.5,96.5
100	0.4733	0.4322	0.3718	0.4379	0.3898	0.3538	0.4081	0.3538	90-100	0.3648	937.8	96.5,96.5
110	0.7735	0.7260	0.6595	0.7322	0.5641	0.5458	0.6177	0.5517	100-110	0.5436	938.3	96.6,96.6
120	1.957	1.615	1.552	1.596	1.111	1.264	1.333	1.283	110-120	0.9567	939.3	96.7,96.7
130	5.500	4.542	4.469	4.492	2.990	3.582	3.635	3.601	120-130	2.293	941.6	96.9,96.9
140	11.15	9.886	9.785	9.823	7.180	8.307	8.342	8.319	130-140	4.919	946.5	97.4,97.4
150	17.51	16.23	16.16	16.17	13.67	14.97	15.00	14.99	140-150	7.629	954.1	98.2,98.2
160	22.36	21.69	21.59	21.64	20.21	20.77	20.79	20.77	150-160	8.534	962.6	99.1,99.1
170	24.78	24.29	24.17	24.24	24.11	23.69	23.72	23.68	160-170	6.427	969.1	99.8,99.8
180	26.36	25.86	25.79	25.80	26.35	25.80	25.80	25.79	170-180	2.368	971.4	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:2024-05-14

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

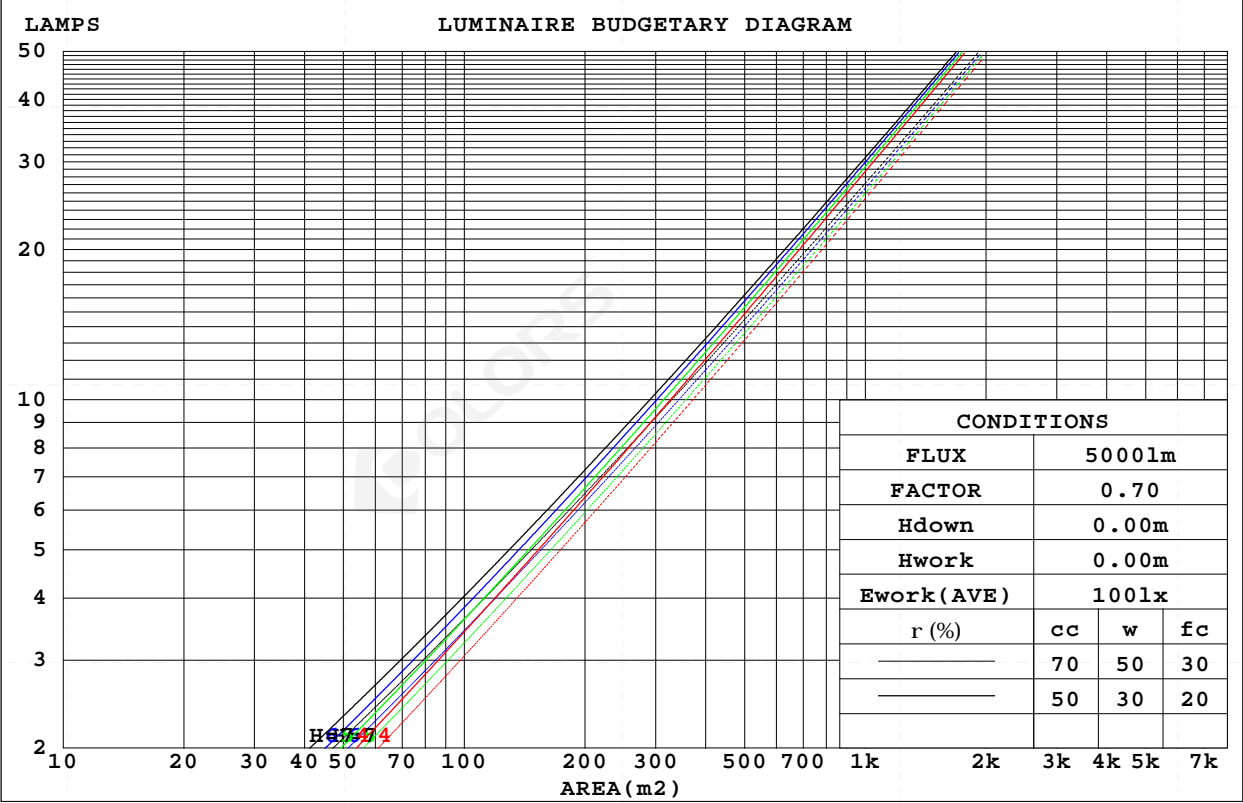


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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	.96
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.03	1.02	1.00	.99	.98	.97	.95	.94	.93	.91
2.0	1.04	1.00	.97	1.02	.99	.96	.98	.95	.93	.95	.93	.91	.91	.90	.88	.87
3.0	.98	.93	.90	.96	.92	.89	.93	.90	.87	.90	.88	.85	.88	.85	.83	.82
4.0	.92	.87	.84	.91	.86	.83	.88	.85	.82	.86	.83	.80	.84	.81	.79	.78
5.0	.87	.82	.78	.86	.82	.78	.84	.80	.77	.82	.79	.76	.80	.77	.75	.74
6.0	.83	.78	.74	.82	.77	.74	.80	.76	.73	.79	.75	.72	.77	.74	.71	.70
7.0	.79	.74	.70	.78	.73	.70	.77	.72	.69	.75	.71	.69	.74	.71	.68	.67
8.0	.75	.70	.66	.75	.70	.66	.73	.69	.66	.72	.68	.65	.71	.67	.65	.64
9.0	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.68	.65	.62	.61
10.0	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.65	.62	.59	.58



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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	.164	.093	.030	.156	.089	.028	.142	.081	.026	.129	.074	.024	.116	.067	.022	
2.0	.155	.085	.026	.149	.082	.025	.136	.076	.024	.125	.070	.022	.114	.065	.020	
3.0	.147	.078	.023	.141	.076	.023	.130	.071	.021	.121	.066	.020	.112	.062	.019	
4.0	.139	.072	.021	.134	.070	.021	.125	.066	.020	.116	.062	.019	.108	.059	.018	
5.0	.132	.067	.019	.127	.065	.019	.119	.062	.018	.112	.059	.018	.105	.056	.017	
6.0	.125	.063	.018	.122	.061	.018	.114	.059	.017	.108	.056	.016	.102	.053	.016	
7.0	.120	.059	.017	.116	.058	.017	.110	.056	.016	.104	.053	.015	.098	.051	.015	
8.0	.114	.056	.016	.111	.055	.015	.106	.053	.015	.100	.051	.015	.095	.049	.014	
9.0	.109	.053	.015	.107	.052	.015	.102	.050	.014	.097	.048	.014	.092	.047	.014	
10.0	.105	.050	.014	.103	.050	.014	.098	.048	.013	.093	.046	.013	.089	.045	.013	

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	.217	.217	.217	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.197	.184	.173	.169	.158	.149	.115	.109	.103	.066	.063	.060	.021	.020	.019	
2.0	.181	.160	.142	.155	.137	.122	.106	.095	.085	.061	.055	.050	.020	.018	.016	
3.0	.168	.141	.119	.144	.121	.103	.099	.084	.072	.057	.049	.043	.018	.016	.014	
4.0	.157	.126	.102	.135	.109	.089	.093	.076	.062	.054	.044	.037	.017	.014	.012	
5.0	.148	.114	.089	.127	.099	.078	.087	.069	.055	.051	.040	.033	.016	.013	.011	
6.0	.140	.105	.079	.120	.091	.069	.083	.063	.049	.048	.037	.029	.016	.012	.010	
7.0	.133	.097	.072	.114	.084	.062	.079	.059	.044	.046	.035	.026	.015	.011	.009	
8.0	.127	.091	.065	.109	.079	.057	.076	.055	.040	.044	.033	.024	.014	.011	.008	
9.0	.122	.085	.061	.105	.074	.053	.073	.052	.037	.042	.031	.022	.014	.010	.007	
10.0	.117	.081	.057	.101	.070	.049	.070	.049	.035	.041	.029	.021	.013	.010	.007	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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	16.6	17.4	16.9	17.7	17.9	17.7	18.5	18.0	18.8	19.0
3H	16.5	17.2	16.8	17.5	17.7	17.6	18.3	17.9	18.6	18.8
4H	16.4	17.1	16.7	17.4	17.6	17.5	18.2	17.8	18.5	18.7
6H	16.3	17.0	16.6	17.2	17.6	17.4	18.1	17.7	18.3	18.7
8H	16.2	16.9	16.6	17.2	17.5	17.3	18.0	17.7	18.3	18.6
12H	16.2	16.8	16.6	17.1	17.5	17.3	17.9	17.7	18.2	18.6
4H 2H	16.5	17.2	16.8	17.4	17.7	17.5	18.2	17.9	18.5	18.8
3H	16.3	16.9	16.7	17.2	17.6	17.4	18.0	17.7	18.3	18.6
4H	16.2	16.7	16.6	17.1	17.5	17.3	17.8	17.7	18.2	18.5
6H	16.1	16.6	16.5	17.0	17.4	17.2	17.6	17.6	18.0	18.4
8H	16.0	16.5	16.5	16.9	17.3	17.1	17.6	17.5	18.0	18.4
12H	16.0	16.4	16.4	16.8	17.3	17.0	17.5	17.5	17.9	18.4
8H 4H	16.0	16.5	16.5	16.9	17.3	17.1	17.6	17.5	18.0	18.4
6H	15.9	16.3	16.4	16.7	17.2	17.0	17.4	17.5	17.8	18.3
8H	15.9	16.2	16.4	16.7	17.2	16.9	17.3	17.4	17.7	18.2
12H	15.8	16.1	16.3	16.6	17.1	16.9	17.1	17.4	17.6	18.2
12H 4H	16.0	16.4	16.4	16.8	17.3	17.0	17.5	17.5	17.9	18.3
6H	15.9	16.2	16.4	16.7	17.2	16.9	17.3	17.4	17.7	18.2
8H	15.8	16.1	16.3	16.6	17.1	16.9	17.1	17.4	17.6	18.2
Variations with the observer position at spacings:										
S = 1.0H		+ 2.2 / - 5.5					+ 2.8 / - 5.5			
1.5H		+ 3.2 / - 3.1					+ 4.2 / - 3.6			
2.0H		+ 3.7 / - 5.3					+ 4.0 / - 5.4			

CIE Pub.117, 971.4 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.1$)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JYH
 Test Date: 2024-05-14

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:

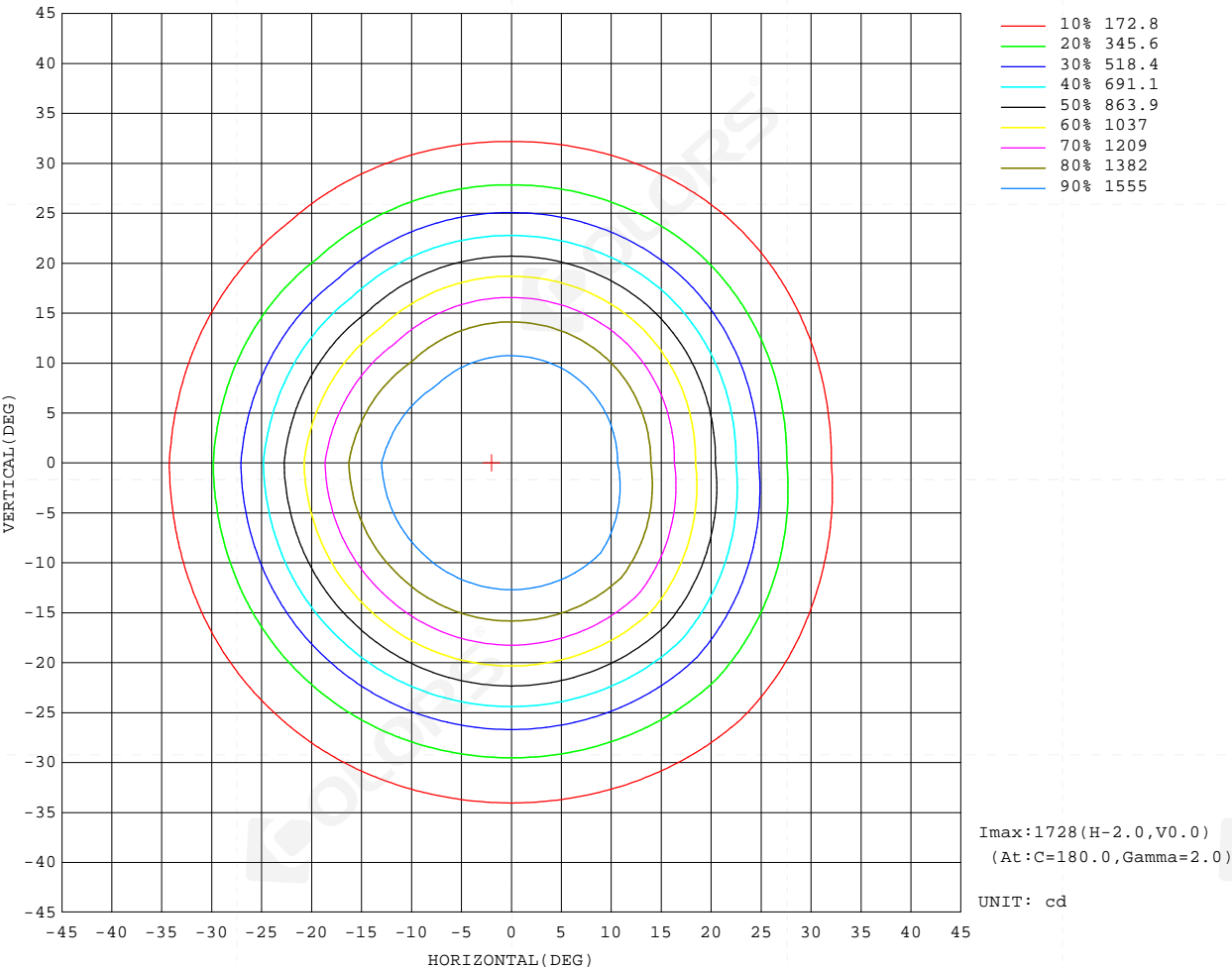
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	88	84	92	87	84	80
1.00	98	93	89	97	92	89	95	91	88	84
1.25	102	97	94	101	96	93	99	95	92	87
1.50	105	100	97	103	99	96	101	97	95	90
2.00	108	103	100	106	102	99	103	100	97	91
2.50	109	105	102	107	104	101	104	101	99	92
3.00	111	107	105	109	106	103	105	102	101	93
4.00	113	110	108	110	108	106	106	104	103	95
5.00	114	112	110	112	110	108	107	106	104	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:2024-05-14

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:

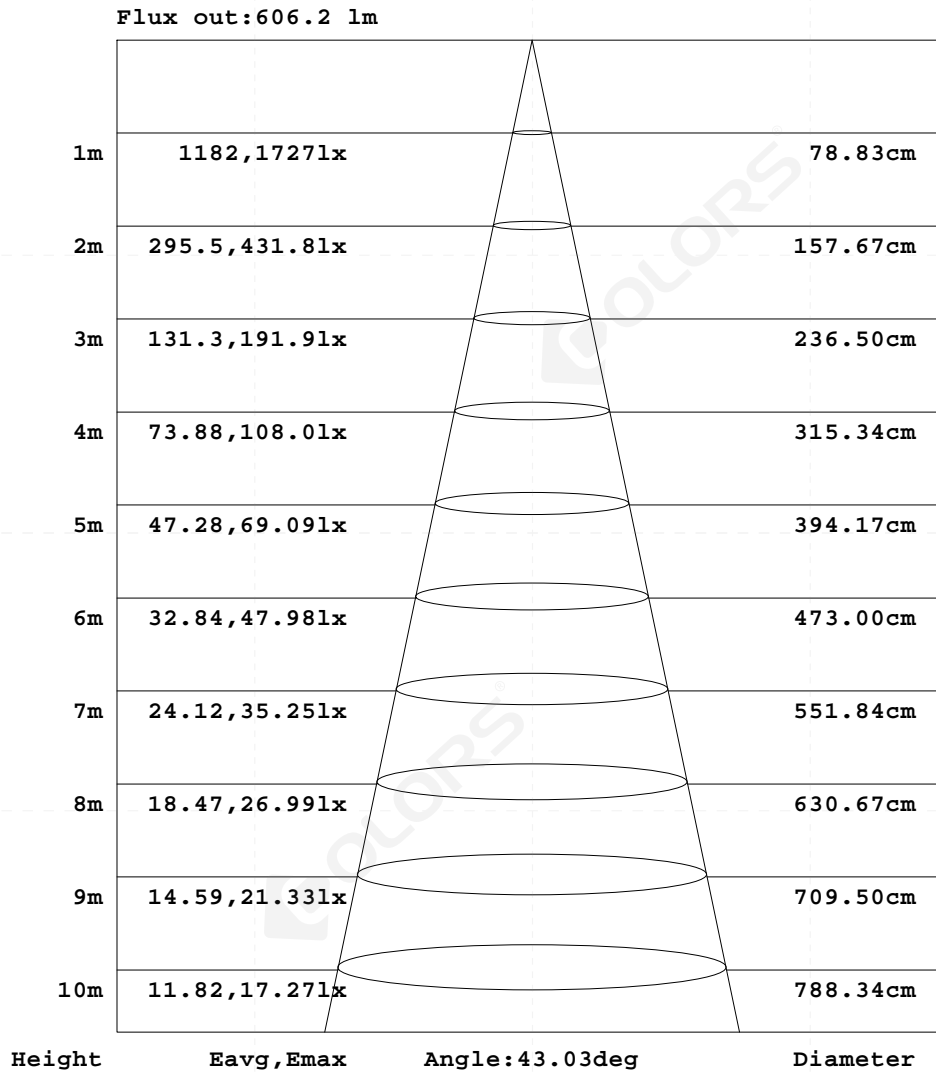
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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:

AAI Figure

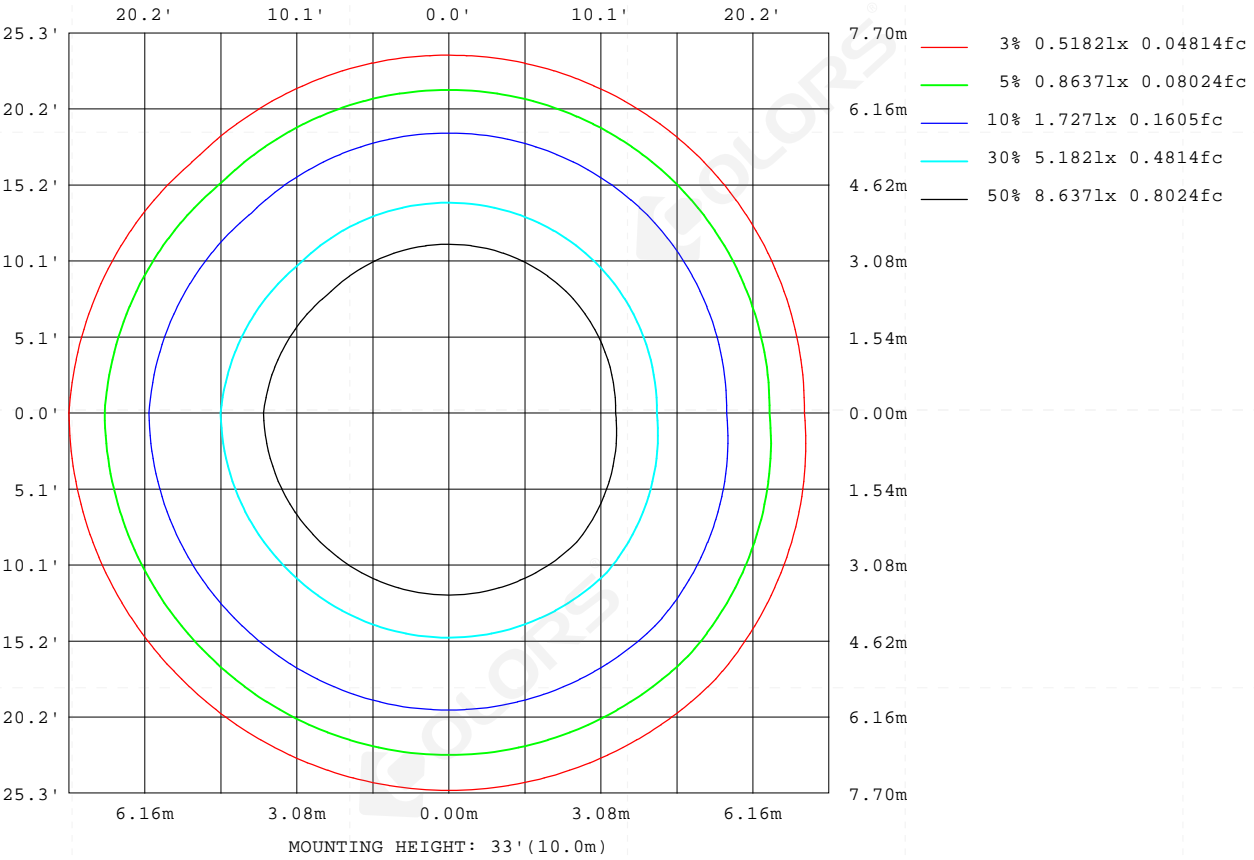


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-05-14

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:

LED Avg.L Report

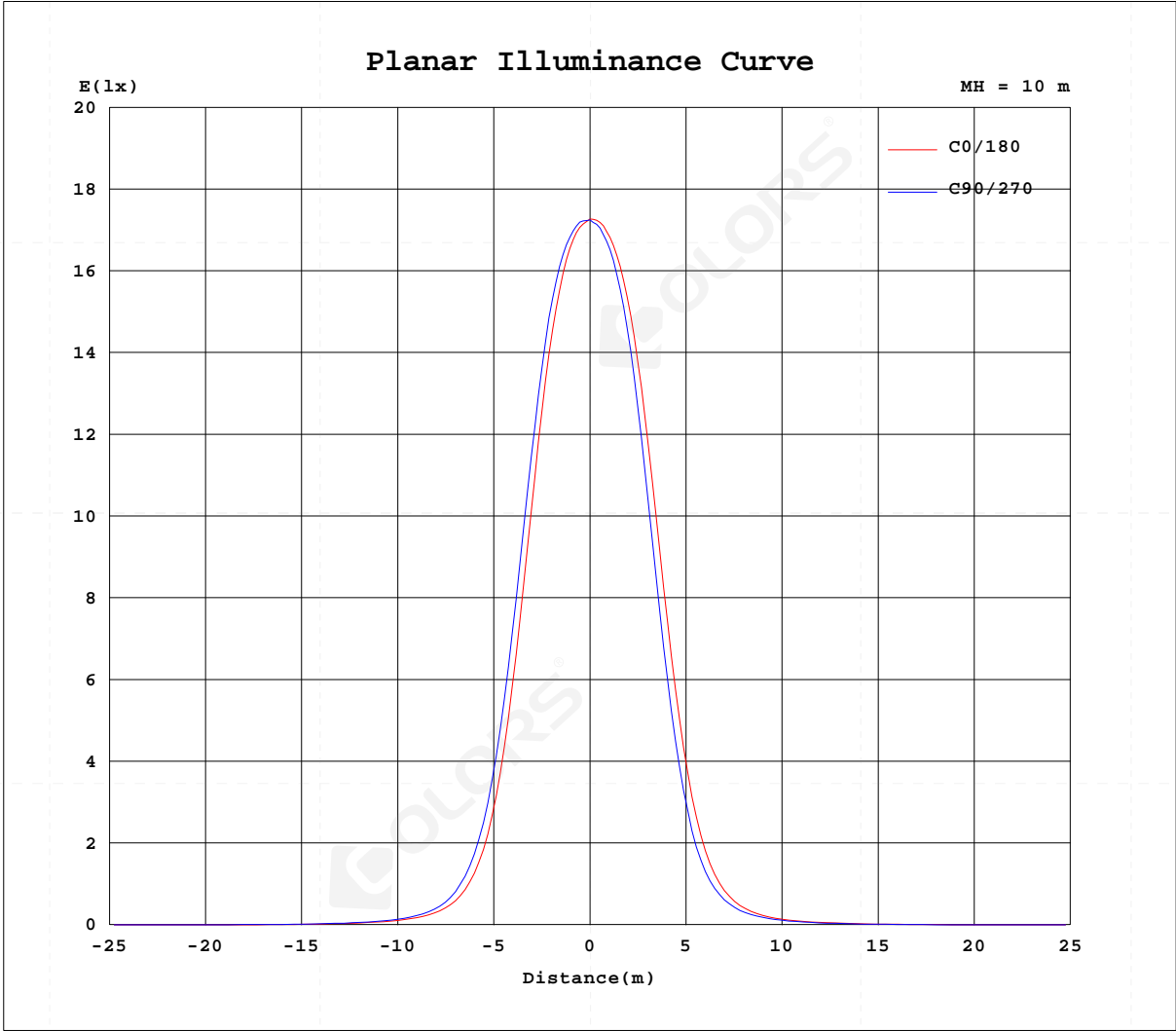
Test:U:48.00V I:0.2450A P:11.76W PF:1.000 Freq:0Hz Lamp Flux:971.439x1 lm		
NAME: FD-HM40SG52(T)-N950B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	3545
L_0~180(75)av	510
L_0~180(85)av	1548
L_90~270(65)av	3516
L_90~270(75)av	481
L_90~270(85)av	1496
L_45(65)av	3529
L_45(75)av	475
L_45(85)av	1522

Standard: GB/T 29293-2012

C Range: 0 - 360DEG	g Range: 0 - 180DEG
C Interval: 45.0DEG	g 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:2024-05-14	Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-05-14

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	1727	1725	1725	1723	1727	1725	1725	1723										
5	1696	1722	1718	1718	1716	1692	1693	1692										
10	1579	1644	1648	1647	1649	1586	1582	1581										
15	1311	1437	1437	1436	1460	1330	1322	1325										
20	900	1064	1068	1068	1102	928	922	924										
25	500	643	645	645	677	525	521	521										
30	236	318	323	320	337	249	243	246										
35	108	147	147	147	153	113	112	112										
40	55.4	71.5	71.9	71.7	73.9	57.3	56.8	56.7										
45	31.9	39.3	39.6	39.4	40.5	32.8	32.5	32.5										
50	19.6	23.6	23.7	23.6	24.0	20.1	20.0	19.9										
55	11.8	14.2	14.3	14.3	14.5	12.1	12.0	12.0										
60	6.02	7.76	7.76	7.77	8.09	6.29	6.26	6.22										
65	2.31	3.39	3.41	3.39	3.69	2.61	2.53	2.53										
70	0.42	0.74	0.80	0.76	0.97	0.54	0.48	0.53										
75	0.25	0.21	0.22	0.21	0.28	0.28	0.28	0.28										
80	0.25	0.22	0.22	0.22	0.28	0.28	0.29	0.28										
85	0.25	0.25	0.22	0.25	0.29	0.28	0.31	0.28										
90	0.26	0.29	0.28	0.29	0.31	0.28	0.32	0.28										
95	0.34	0.35	0.29	0.35	0.34	0.29	0.35	0.30										
100	0.47	0.43	0.37	0.44	0.39	0.35	0.41	0.35										
105	0.56	0.56	0.50	0.55	0.46	0.48	0.49	0.47										
110	0.77	0.73	0.66	0.73	0.56	0.55	0.62	0.55										
115	1.16	1.03	0.97	1.03	0.75	0.79	0.85	0.80										
120	1.96	1.61	1.55	1.60	1.11	1.26	1.33	1.28										
125	3.33	2.73	2.67	2.72	1.80	2.17	2.23	2.17										
130	5.50	4.54	4.47	4.49	2.99	3.58	3.64	3.60										
135	8.20	6.96	6.89	6.92	4.75	5.63	5.67	5.64										
140	11.1	9.89	9.79	9.82	7.18	8.31	8.34	8.32										
145	14.3	13.0	12.9	12.9	10.2	11.5	11.5	11.5										
150	17.5	16.2	16.2	16.2	13.7	15.0	15.0	15.0										
155	20.3	19.2	19.2	19.2	17.2	18.2	18.2	18.2										
160	22.4	21.7	21.6	21.6	20.2	20.8	20.8	20.8										
165	23.7	23.3	23.1	23.2	22.5	22.5	22.5	22.5										
170	24.8	24.3	24.2	24.2	24.1	23.7	23.7	23.7										
175	25.7	25.2	25.1	25.2	25.4	24.9	24.9	24.9										
180	26.4	25.9	25.8	25.8	26.4	25.8	25.8	25.8										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2024-05-14

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: