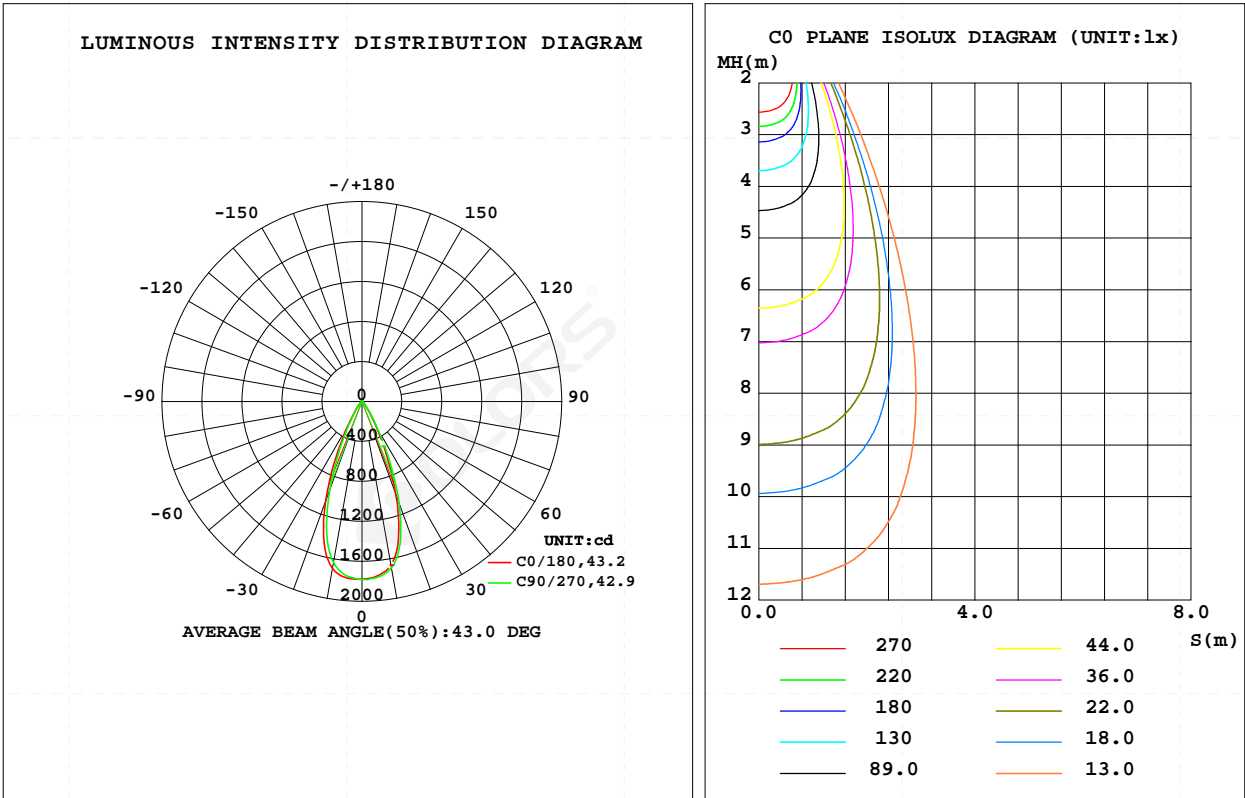


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.2260A P:10.84W PF:1.000 Freq:0Hz Lamp Flux:995.457x1 lm		
NAME: FD-HM40S3852(T)-N938B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 91.83 lm/W			
MODEL		I _{max} (cd)	1783	S/MH(C0/180)	0.65
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.64
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	995.46	h UP,DN(C0-180)	1.9,50.1
NOMINAL FLUX(lm)	995.457	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.6,46.4
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

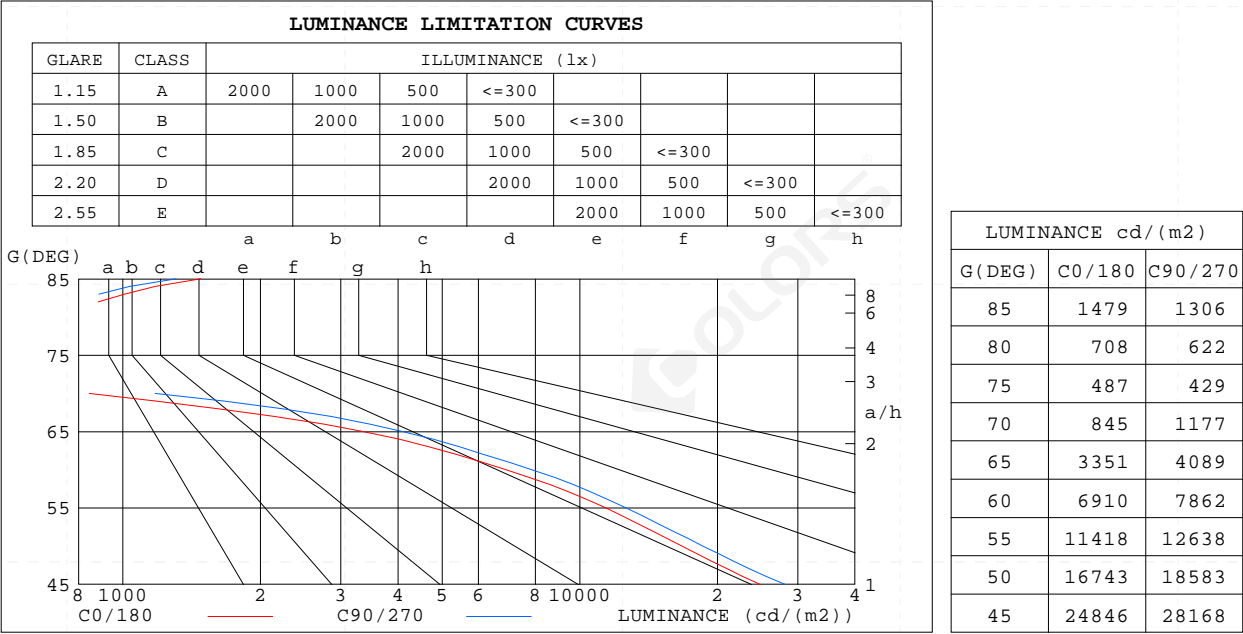
ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1663	1688	1691	1692	1695	1641	1640	1639	0- 10	165.3	165.3	16.6,16.6
20	1000	1086	1088	1089	1067	954.2	948.0	948.9	10- 20	386.3	551.6	55.4,55.4
30	271.9	321.6	325.6	323.0	301.4	252.3	247.4	250.6	20- 30	274.5	826.1	83,83
40	61.86	71.86	72.34	72.27	67.41	58.13	57.63	57.65	30- 40	89.03	915.2	91.9,91.9
50	21.52	23.84	23.89	23.91	22.41	20.38	20.26	20.28	40- 50	29.51	944.7	94.9,94.9
60	6.910	7.842	7.862	7.884	7.298	6.385	6.360	6.340	50- 60	12.19	956.9	96.1,96.1
70	0.5777	0.7521	0.8054	0.7658	0.7470	0.5483	0.4792	0.5402	60- 70	3.229	960.1	96.4,96.4
80	0.2459	0.2279	0.2159	0.2219	0.2878	0.2878	0.2879	0.2878	70- 80	0.3176	960.4	96.5,96.5
90	0.2638	0.2999	0.2638	0.3000	0.3179	0.2878	0.3238	0.2878	80- 90	0.2986	960.7	96.5,96.5
100	0.4613	0.4440	0.3838	0.4499	0.4019	0.3718	0.4259	0.3597	90-100	0.3744	961.1	96.5,96.5
110	0.7489	0.7439	0.6775	0.7443	0.5942	0.5577	0.6237	0.5576	100-110	0.5533	961.6	96.6,96.6
120	1.811	1.644	1.575	1.627	1.213	1.301	1.344	1.300	110-120	0.9671	962.6	96.7,96.7
130	5.251	4.606	4.553	4.577	3.293	3.629	3.683	3.642	120-130	2.319	964.9	96.9,96.9
140	10.89	10.08	10.03	10.05	7.796	8.454	8.471	8.470	130-140	5.002	969.9	97.4,97.4
150	17.37	16.62	16.56	16.57	14.58	15.29	15.30	15.31	140-150	7.796	977.7	98.2,98.2
160	22.63	22.21	22.14	22.20	21.08	21.24	21.26	21.25	150-160	8.740	986.5	99.1,99.1
170	25.24	24.86	24.79	24.84	24.77	24.23	24.24	24.23	160-170	6.580	993.0	99.8,99.8
180	26.99	26.45	26.39	26.45	27.00	26.43	26.41	26.39	170-180	2.423	995.5	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

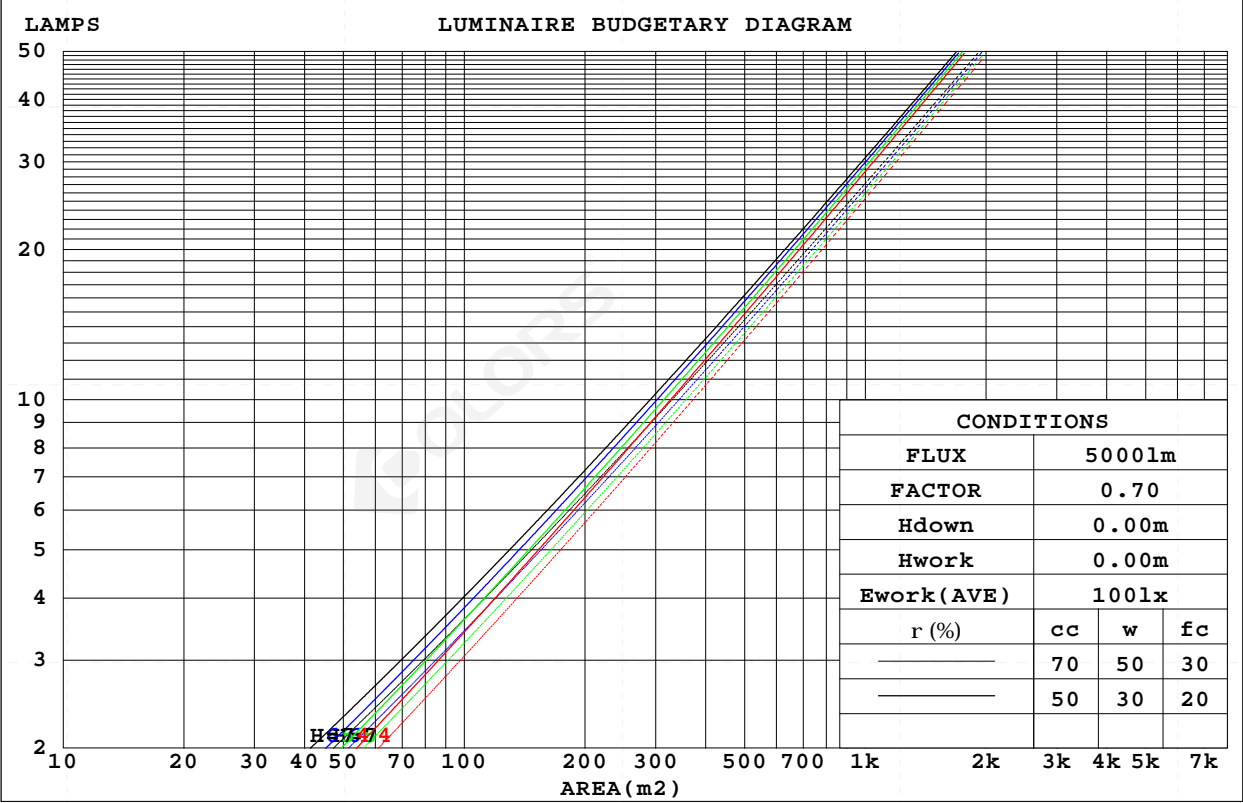


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-05-14

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	.97
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.00	.99	.98	.97	.95	.94	.93	.92
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	.84	.82
4.0	.92	.87	.84	.91	.87	.83	.89	.85	.82	.86	.83	.80	.84	.81	.79	.78
5.0	.88	.82	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.81	.78	.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	.72	.69	.74	.71	.68	.67
8.0	.75	.70	.67	.75	.70	.66	.73	.69	.66	.72	.68	.65	.71	.68	.65	.64
9.0	.72	.67	.63	.71	.67	.63	.70	.66	.63	.69	.65	.62	.68	.65	.62	.61
10.0	.69	.64	.61	.68	.64	.60	.67	.63	.60	.67	.63	.60	.66	.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	.128	.074	.024	.116	.067	.022	
2.0	.155	.085	.026	.148	.082	.025	.136	.076	.023	.125	.070	.022	.114	.065	.020	
3.0	.146	.078	.023	.141	.075	.023	.130	.070	.021	.120	.066	.020	.111	.062	.019	
4.0	.138	.072	.021	.134	.070	.021	.124	.066	.020	.116	.062	.019	.108	.059	.018	
5.0	.131	.067	.019	.127	.065	.019	.119	.062	.018	.112	.059	.018	.105	.056	.017	
6.0	.125	.063	.018	.121	.061	.018	.114	.058	.017	.107	.056	.016	.101	.053	.016	
7.0	.119	.059	.017	.116	.058	.016	.110	.055	.016	.104	.053	.015	.098	.051	.015	
8.0	.114	.056	.016	.111	.055	.015	.105	.053	.015	.100	.051	.015	.095	.049	.014	
9.0	.109	.053	.015	.106	.052	.015	.101	.050	.014	.096	.048	.014	.092	.047	.013	
10.0	.105	.050	.014	.102	.049	.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	.090	.065	.109	.078	.057	.076	.055	.040	.044	.033	.024	.014	.011	.008	
9.0	.122	.085	.060	.105	.074	.053	.073	.052	.037	.042	.031	.022	.014	.010	.007	
10.0	.117	.081	.056	.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	2H	17.0	17.8	17.3	18.0	18.2	17.6	18.4	17.9	18.6	18.8
	3H	16.8	17.6	17.1	17.8	18.1	17.5	18.2	17.8	18.4	18.7
	4H	16.7	17.5	17.1	17.7	18.0	17.4	18.1	17.7	18.3	18.6
	6H	16.7	17.3	17.0	17.6	17.9	17.3	17.9	17.6	18.2	18.5
	8H	16.6	17.2	17.0	17.6	17.9	17.2	17.9	17.6	18.2	18.5
	12H	16.6	17.2	16.9	17.5	17.8	17.2	17.8	17.5	18.1	18.4
4H	2H	16.8	17.5	17.1	17.8	18.1	17.4	18.1	17.7	18.4	18.7
	3H	16.6	17.3	17.0	17.6	17.9	17.2	17.9	17.6	18.2	18.5
	4H	16.5	17.1	16.9	17.5	17.8	17.1	17.7	17.5	18.1	18.4
	6H	16.4	16.9	16.9	17.3	17.7	17.0	17.5	17.5	17.9	18.3
	8H	16.4	16.8	16.8	17.2	17.7	17.0	17.4	17.4	17.8	18.3
	12H	16.3	16.7	16.8	17.2	17.6	16.9	17.3	17.4	17.8	18.2
8H	4H	16.4	16.8	16.8	17.2	17.7	17.0	17.4	17.4	17.8	18.3
	6H	16.3	16.6	16.8	17.1	17.6	16.9	17.2	17.3	17.7	18.2
	8H	16.2	16.5	16.7	17.0	17.5	16.8	17.1	17.3	17.6	18.1
	12H	16.2	16.4	16.7	16.9	17.5	16.7	17.0	17.3	17.5	18.1
12H	4H	16.3	16.7	16.8	17.2	17.6	16.9	17.3	17.4	17.8	18.2
	6H	16.2	16.5	16.7	17.0	17.5	16.8	17.1	17.3	17.6	18.1
	8H	16.2	16.4	16.7	16.9	17.5	16.7	17.0	17.3	17.5	18.1
Variations with the observer position at spacings:											
S = 1.0H	+ 2.4 / - 5.4					+ 2.8 / - 5.5					
1.5H	+ 3.6 / - 3.2					+ 4.2 / - 3.6					
2.0H	+ 3.7 / - 5.2					+ 4.0 / - 5.4					

CIE Pub.117, 995.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.0)

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:

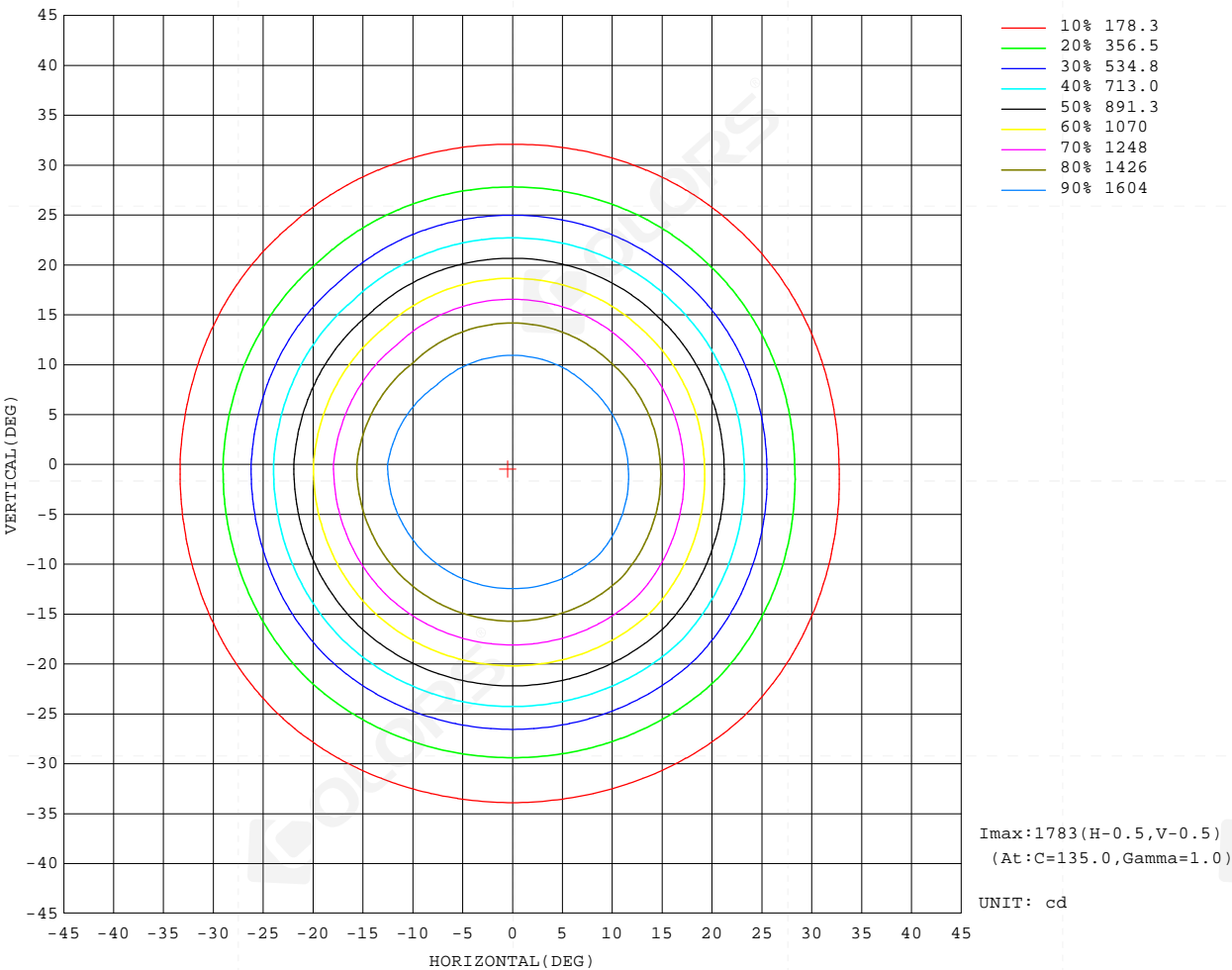
UTILIZATION FACTORS TABLE

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) x RCR = 5									
k = 0.60	87	80	77	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	92	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	103	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:

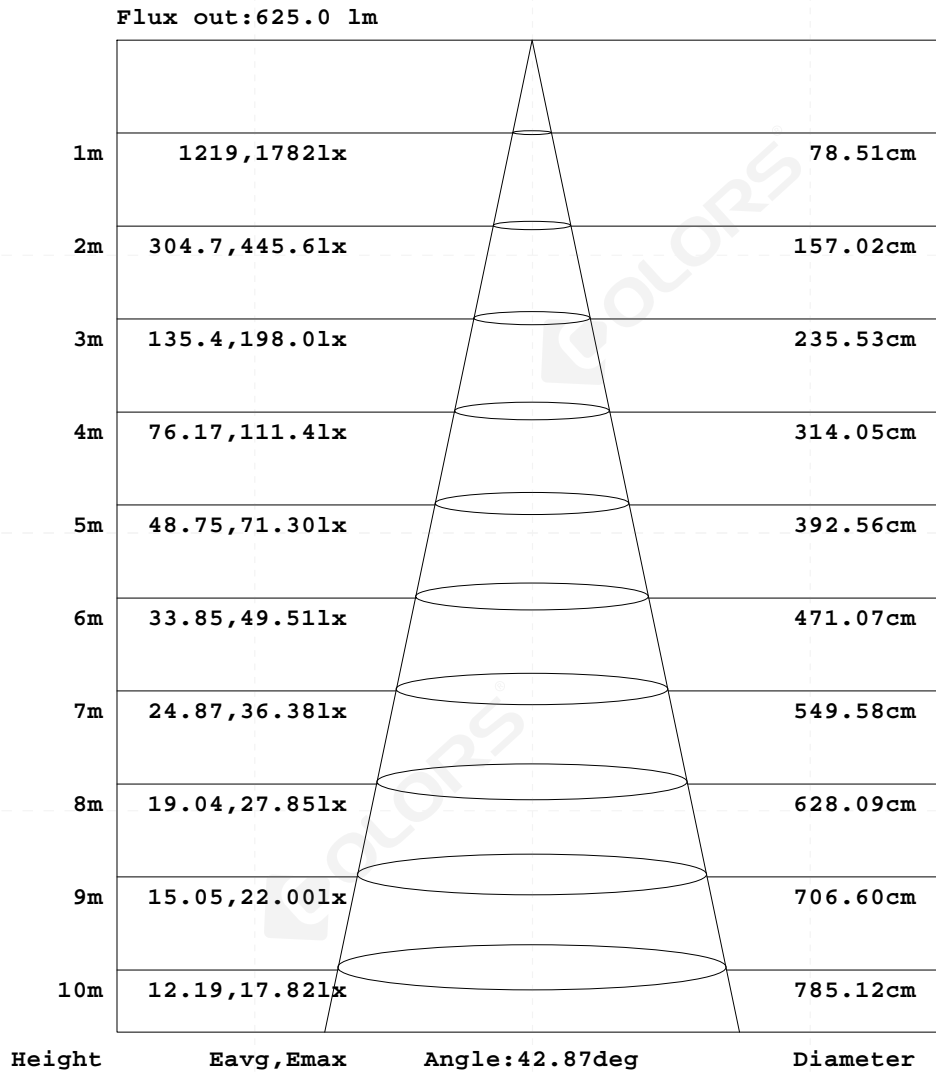
ISOCANDELA DIAGRAM



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

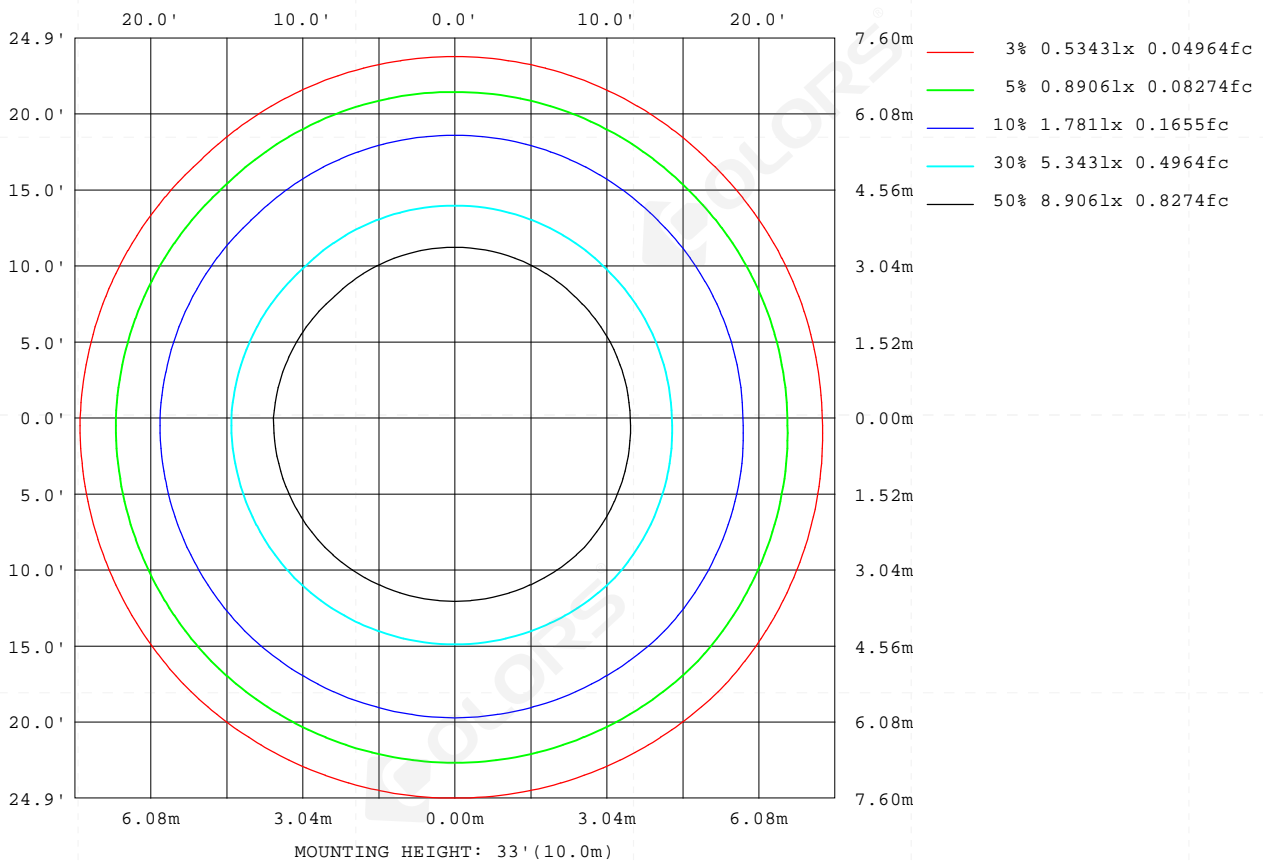


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

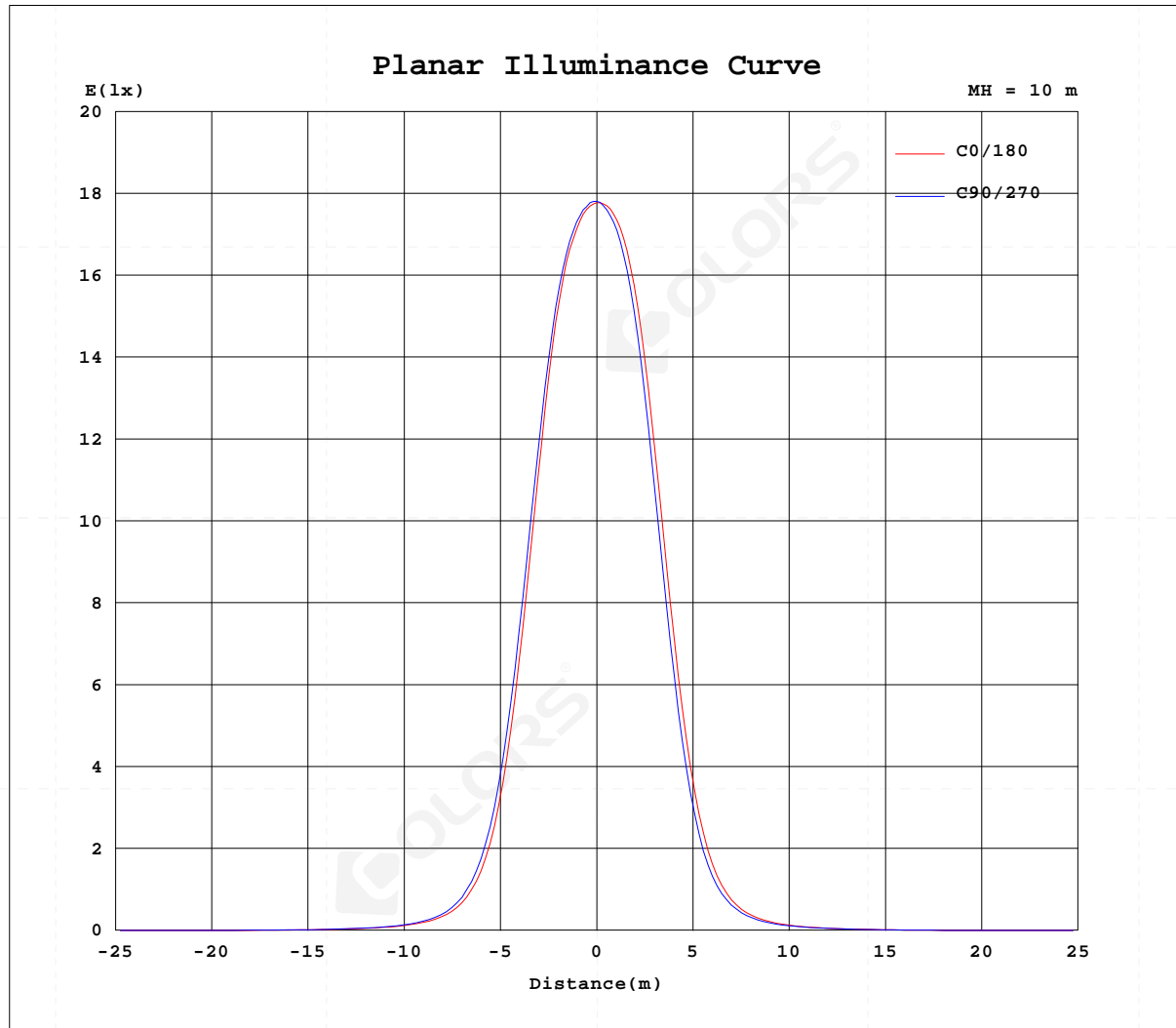
Test:U:48.00V I:0.2260A P:10.84W PF:1.000 Freq:0Hz Lamp Flux:995.457x1 lm		
NAME: FD-HM40SG52(T)-N938B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	3548
L_0~180(75)av	527
L_0~180(85)av	1600
L_90~270(65)av	3562
L_90~270(75)av	492
L_90~270(85)av	1513
L_45(65)av	3588
L_45(75)av	487
L_45(85)av	1574

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

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	1777	1780	1781	1782	1777	1780	1781	1782										
5	1753	1768	1766	1768	1770	1754	1751	1752										
10	1663	1688	1691	1692	1695	1641	1640	1639										
15	1414	1475	1474	1474	1469	1371	1366	1366										
20	1000	1086	1088	1089	1067	954	948	949										
25	570	653	655	655	628	535	531	532										
30	272	322	326	323	301	252	247	251										
35	124	147	148	148	137	115	113	114										
40	61.9	71.9	72.3	72.3	67.4	58.1	57.6	57.7										
45	35.1	39.6	39.8	39.8	37.5	33.1	33.0	33.0										
50	21.5	23.8	23.9	23.9	22.4	20.4	20.3	20.3										
55	13.1	14.4	14.5	14.5	13.5	12.3	12.1	12.2										
60	6.91	7.84	7.86	7.88	7.30	6.38	6.36	6.34										
65	2.83	3.43	3.46	3.48	3.16	2.63	2.57	2.58										
70	0.58	0.75	0.81	0.77	0.75	0.55	0.48	0.54										
75	0.25	0.22	0.22	0.22	0.29	0.29	0.29	0.29										
80	0.25	0.23	0.22	0.22	0.29	0.29	0.29	0.29										
85	0.26	0.26	0.23	0.26	0.30	0.29	0.30	0.29										
90	0.26	0.30	0.26	0.30	0.32	0.29	0.32	0.29										
95	0.34	0.37	0.29	0.37	0.36	0.36	0.37	0.31										
100	0.46	0.44	0.38	0.45	0.40	0.37	0.43	0.36										
105	0.56	0.57	0.53	0.57	0.49	0.47	0.50	0.47										
110	0.75	0.74	0.68	0.74	0.59	0.56	0.62	0.56										
115	1.11	1.05	0.99	1.04	0.80	0.84	0.87	0.82										
120	1.81	1.64	1.58	1.63	1.21	1.30	1.34	1.30										
125	3.13	2.78	2.74	2.76	1.99	2.19	2.25	2.20										
130	5.25	4.61	4.55	4.58	3.29	3.63	3.68	3.64										
135	7.91	7.10	7.04	7.07	5.21	5.71	5.74	5.72										
140	10.9	10.1	10.0	10.0	7.80	8.45	8.47	8.47										
145	14.1	13.3	13.2	13.3	11.0	11.7	11.7	11.8										
150	17.4	16.6	16.6	16.6	14.6	15.3	15.3	15.3										
155	20.4	19.7	19.7	19.7	18.1	18.6	18.6	18.6										
160	22.6	22.2	22.1	22.2	21.1	21.2	21.3	21.2										
165	24.1	23.8	23.7	23.8	23.2	23.0	23.0	23.0										
170	25.2	24.9	24.8	24.8	24.8	24.2	24.2	24.2										
175	26.3	25.8	25.7	25.8	26.0	25.5	25.5	25.5										
180	27.0	26.5	26.4	26.5	27.0	26.4	26.4	26.4										

C Range: 0 - 360DEGC Interval: 45.0DEGTest Speed: HIGHTemperature:25.3DEGOperators:JYHTest Date:2024-05-14

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