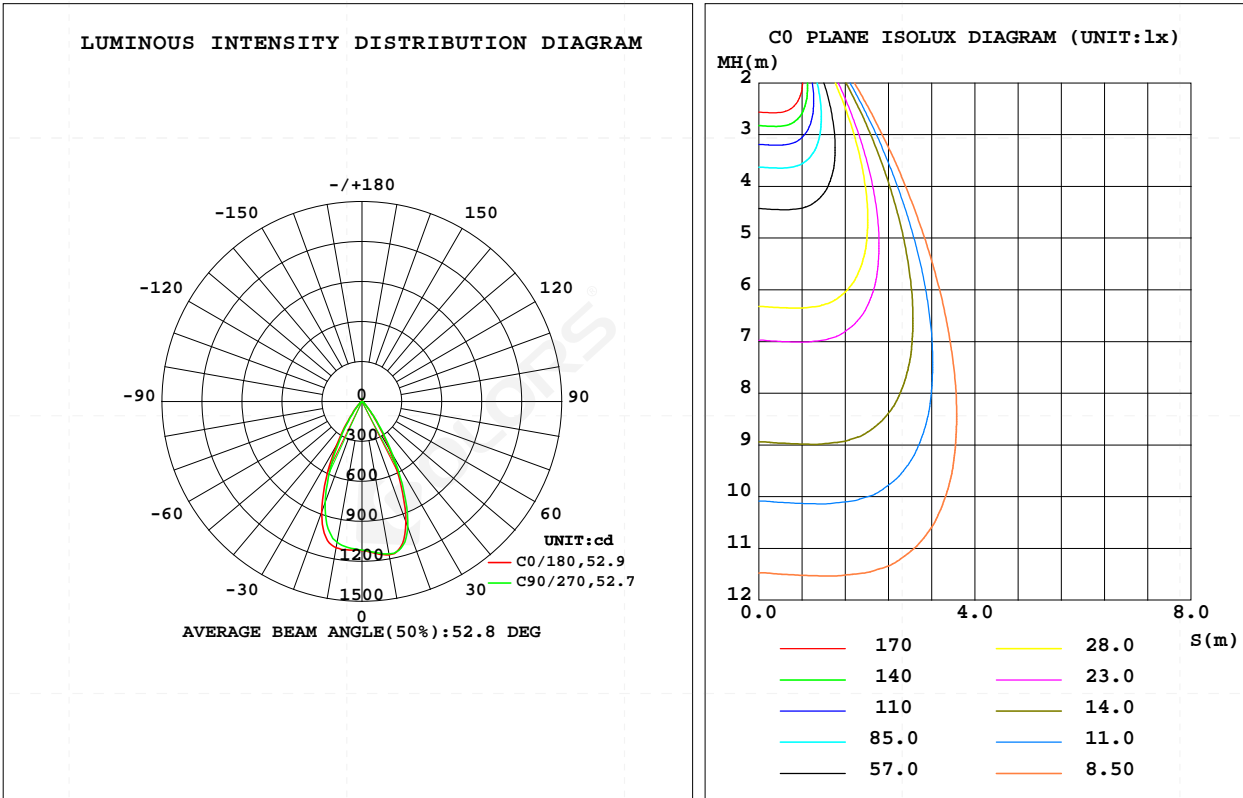


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.2400A P:11.52W PF:1.000 Freq:0Hz Lamp Flux:930.229x1 lm		
NAME: FD-HM40S5052(T)-N930B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.75 lm/W			
MODEL		I _{max} (cd)	1169	S/MH(C0/180)	0.81
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.77
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	930.23	h UP,DN(C0-180)	1.8,52.3
NOMINAL FLUX(lm)	930.229	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.6,44.3
LAMPS INSIDE	1	h up(%)	3.4	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	48	h down(%)	96.6	CIBSE SHR MAX	0.80



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

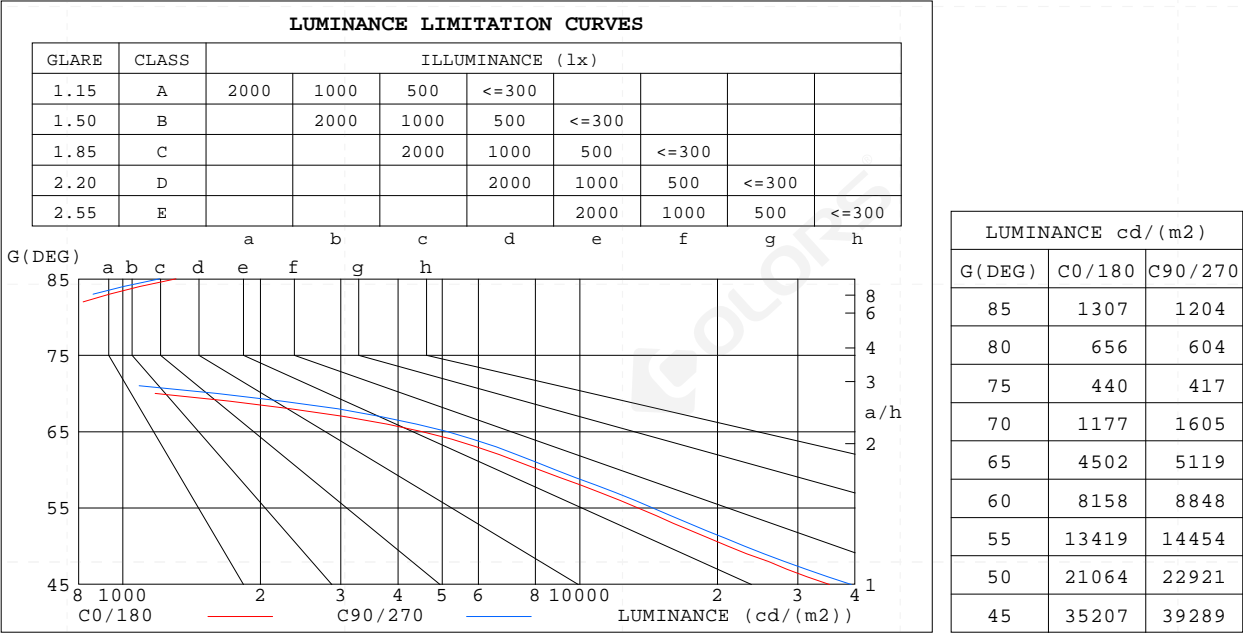
ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1169	1162	1162	1162	1115	1075	1073	1073	0- 10	107.2	107.2	11.5,11.5
20	966.6	1003	1004	1002	886.2	813.2	808.2	808.9	10- 20	295.0	402.2	43.2,43.2
30	415.2	462.8	465.0	466.3	391.1	346.5	340.7	343.2	20- 30	298.5	700.7	75.3,75.3
40	101.5	114.9	115.7	115.5	102.1	88.64	87.52	87.81	30- 40	137.8	838.5	90.1,90.1
50	27.08	29.31	29.47	29.49	27.51	24.71	24.58	24.59	40- 50	41.72	880.2	94.6,94.6
60	8.158	8.829	8.848	8.859	7.939	7.114	7.082	7.057	50- 60	14.21	894.4	96.1,96.1
70	0.8053	1.054	1.098	1.080	0.6915	0.5257	0.4714	0.5142	60- 70	3.781	898.2	96.6,96.6
80	0.2279	0.2159	0.2099	0.2159	0.2699	0.2877	0.2638	0.2578	70- 80	0.3188	898.5	96.6,96.6
90	0.2878	0.2998	0.2818	0.2879	0.3058	0.2878	0.3059	0.2698	80- 90	0.2841	898.8	96.6,96.6
100	0.4491	0.4261	0.3717	0.4198	0.3900	0.3598	0.4020	0.3597	90-100	0.3559	899.1	96.7,96.7
110	0.8273	0.7862	0.7315	0.7806	0.6303	0.6709	0.6664	0.6350	100-110	0.5502	899.7	96.7,96.7
120	2.169	1.950	1.894	1.928	1.554	1.623	1.687	1.635	110-120	1.135	900.8	96.8,96.8
130	5.239	4.739	4.665	4.710	3.963	4.215	4.270	4.231	120-130	2.679	903.5	97.1,97.1
140	9.569	8.960	8.867	8.909	8.048	8.489	8.515	8.490	130-140	4.995	908.5	97.7,97.7
150	14.27	13.73	13.67	13.65	13.11	13.46	13.48	13.47	140-150	6.949	915.5	98.4,98.4
160	18.55	18.22	18.13	18.16	17.33	17.25	17.29	17.25	150-160	7.254	922.7	99.2,99.2
170	21.85	21.46	21.37	21.42	20.58	20.11	20.15	20.11	160-170	5.446	928.2	99.8,99.8
180	23.11	22.70	22.63	22.64	23.12	22.64	22.65	22.62	170-180	2.070	930.2	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

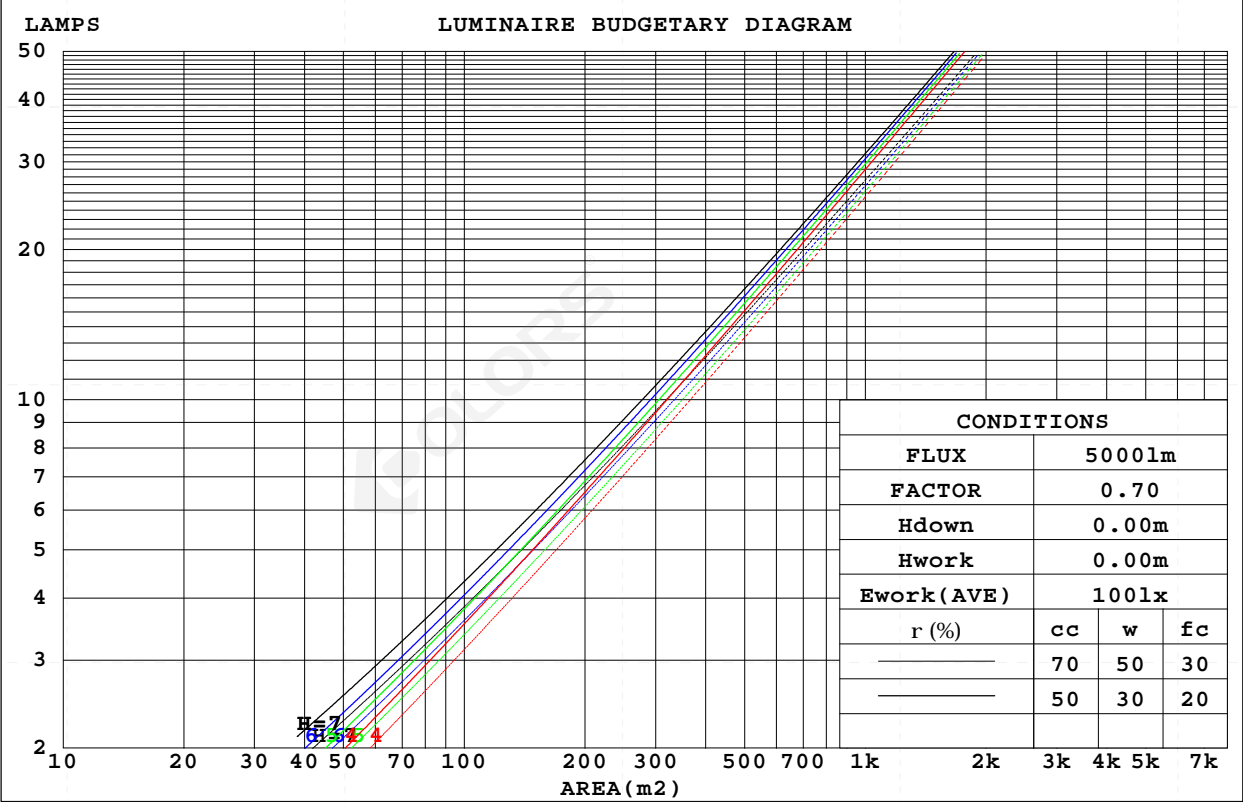


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2024-05-14

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	1.10	1.08	1.05	1.08	1.05	1.03	1.03	1.01	.00	.99	.97	.96	.95	.94	.93	.91
2.0	1.03	.99	.95	1.01	.97	.94	.97	.94	.92	.93	.91	.89	.90	.88	.87	.85
3.0	.96	.91	.87	.94	.90	.86	.91	.88	.85	.88	.85	.83	.86	.83	.81	.79
4.0	.90	.85	.80	.89	.84	.80	.86	.82	.79	.84	.80	.77	.81	.78	.76	.74
5.0	.84	.79	.75	.83	.78	.74	.81	.77	.73	.79	.75	.72	.77	.74	.71	.70
6.0	.80	.74	.70	.79	.73	.69	.77	.72	.69	.75	.71	.68	.73	.70	.67	.66
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.64	.71	.67	.64	.70	.66	.63	.62
8.0	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.63	.60	.66	.63	.60	.58
9.0	.67	.62	.58	.67	.61	.58	.65	.61	.57	.64	.60	.57	.63	.59	.56	.55
10.0	.64	.58	.55	.63	.58	.54	.62	.57	.54	.61	.57	.54	.60	.56	.54	.52



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	.175	.100	.032	.167	.095	.030	.153	.088	.028	.139	.080	.026	.127	.074	.024	
2.0	.167	.091	.028	.160	.088	.027	.148	.082	.026	.137	.077	.024	.126	.071	.022	
3.0	.158	.084	.025	.153	.082	.025	.142	.077	.023	.132	.073	.022	.123	.068	.021	
4.0	.151	.078	.023	.146	.076	.023	.136	.072	.022	.128	.069	.021	.120	.065	.020	
5.0	.143	.073	.021	.139	.071	.021	.131	.068	.020	.123	.065	.019	.116	.062	.019	
6.0	.137	.069	.020	.133	.067	.019	.126	.064	.019	.119	.062	.018	.112	.059	.018	
7.0	.131	.065	.018	.127	.063	.018	.121	.061	.018	.115	.059	.017	.109	.057	.017	
8.0	.125	.061	.017	.122	.060	.017	.116	.058	.017	.110	.056	.016	.105	.054	.016	
9.0	.120	.058	.016	.117	.057	.016	.112	.055	.016	.107	.053	.015	.102	.052	.015	
10.0	.115	.055	.015	.112	.054	.015	.107	.053	.015	.103	.051	.015	.098	.050	.014	

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	.216	.216	.216	.185	.185	.185	.126	.126	.126	.072	.072	.072	.023	.023	.023	
1.0	.197	.183	.171	.169	.157	.147	.115	.108	.102	.066	.063	.059	.021	.020	.019	
2.0	.182	.159	.139	.156	.137	.120	.107	.094	.084	.061	.055	.049	.020	.018	.016	
3.0	.169	.140	.116	.145	.121	.101	.100	.084	.071	.058	.049	.042	.018	.016	.014	
4.0	.159	.125	.099	.136	.108	.086	.094	.075	.061	.054	.044	.036	.017	.014	.012	
5.0	.150	.114	.087	.129	.098	.075	.089	.069	.053	.051	.040	.032	.017	.013	.010	
6.0	.143	.104	.077	.123	.090	.067	.085	.063	.047	.049	.037	.028	.016	.012	.009	
7.0	.136	.097	.069	.117	.084	.060	.081	.059	.043	.047	.035	.025	.015	.011	.008	
8.0	.131	.091	.063	.112	.079	.055	.078	.055	.039	.045	.033	.023	.015	.011	.008	
9.0	.125	.085	.058	.108	.074	.051	.075	.052	.036	.044	.031	.022	.014	.010	.007	
10.0	.121	.081	.054	.104	.070	.048	.072	.050	.034	.042	.029	.020	.014	.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	20.4	21.3	20.7	21.5	21.7	20.9	21.8	21.2	22.0	22.2
3H	20.2	21.1	20.5	21.3	21.6	20.7	21.6	21.0	21.8	22.1
4H	20.1	20.9	20.5	21.2	21.5	20.6	21.4	21.0	21.7	22.0
6H	20.0	20.8	20.4	21.1	21.4	20.5	21.3	20.9	21.6	21.9
8H	20.0	20.7	20.4	21.0	21.3	20.5	21.2	20.9	21.5	21.8
12H	20.0	20.6	20.3	20.9	21.3	20.4	21.1	20.8	21.4	21.8
4H 2H	20.2	21.0	20.5	21.2	21.5	20.7	21.4	21.0	21.7	22.0
3H	20.0	20.7	20.4	21.0	21.3	20.5	21.2	20.9	21.5	21.8
4H	19.9	20.5	20.3	20.9	21.2	20.4	21.0	20.8	21.4	21.7
6H	19.8	20.3	20.2	20.7	21.1	20.3	20.8	20.7	21.2	21.6
8H	19.7	20.2	20.2	20.6	21.1	20.2	20.7	20.7	21.1	21.6
12H	19.7	20.1	20.2	20.6	21.0	20.2	20.6	20.6	21.1	21.5
8H 4H	19.7	20.2	20.2	20.6	21.1	20.2	20.7	20.7	21.1	21.6
6H	19.6	20.0	20.1	20.5	21.0	20.1	20.5	20.6	21.0	21.5
8H	19.6	19.9	20.1	20.4	20.9	20.1	20.4	20.6	20.9	21.4
12H	19.5	19.8	20.0	20.3	20.9	20.0	20.3	20.5	20.8	21.3
12H 4H	19.7	20.1	20.2	20.6	21.0	20.2	20.6	20.6	21.1	21.5
6H	19.6	19.9	20.1	20.4	20.9	20.1	20.4	20.6	20.9	21.4
8H	19.5	19.8	20.0	20.3	20.9	20.0	20.3	20.5	20.8	21.3
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 7.4					+ 3.2 / - 7.6				
1.5H	+ 4.6 / - 5.0					+ 5.0 / - 5.4				
2.0H	+ 4.4 / - 5.3					+ 4.8 / - 5.5				

CIE Pub.117, 930.2 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.3$)

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:

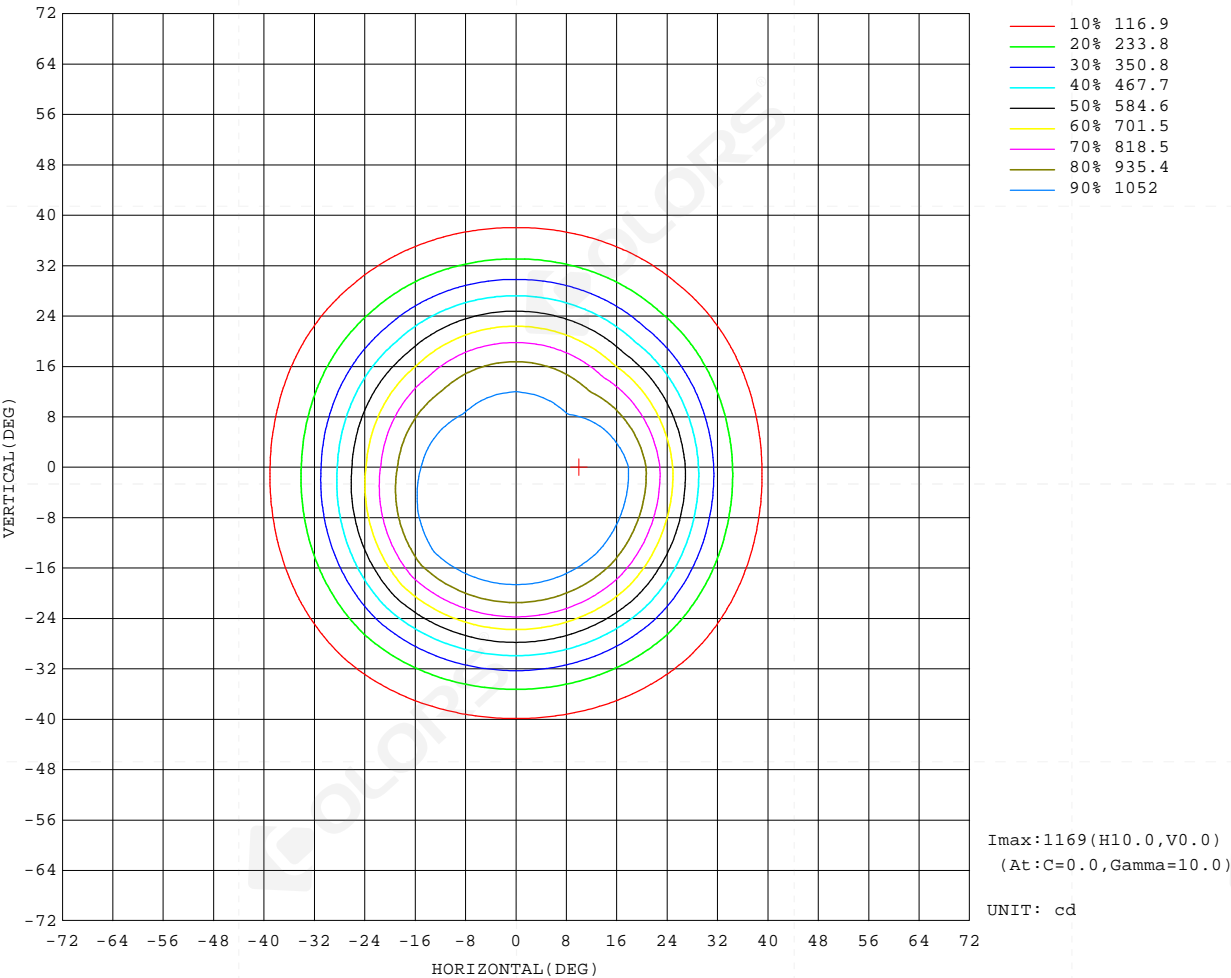
UTILIZATION FACTORS TABLE

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	85	79	75	85	79	75	84	78	75	71
0.80	93	87	83	92	86	83	91	86	82	78
1.00	98	92	88	96	91	88	95	91	87	83
1.25	102	96	93	100	96	92	98	94	91	86
1.50	104	100	96	103	99	95	100	97	94	89
2.00	107	103	100	106	102	99	102	99	97	91
2.50	109	105	102	107	104	101	103	101	99	92
3.00	111	107	104	109	105	103	105	102	100	93
4.00	113	110	108	110	108	106	106	104	103	94
5.00	114	112	110	112	110	108	107	106	104	95
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:

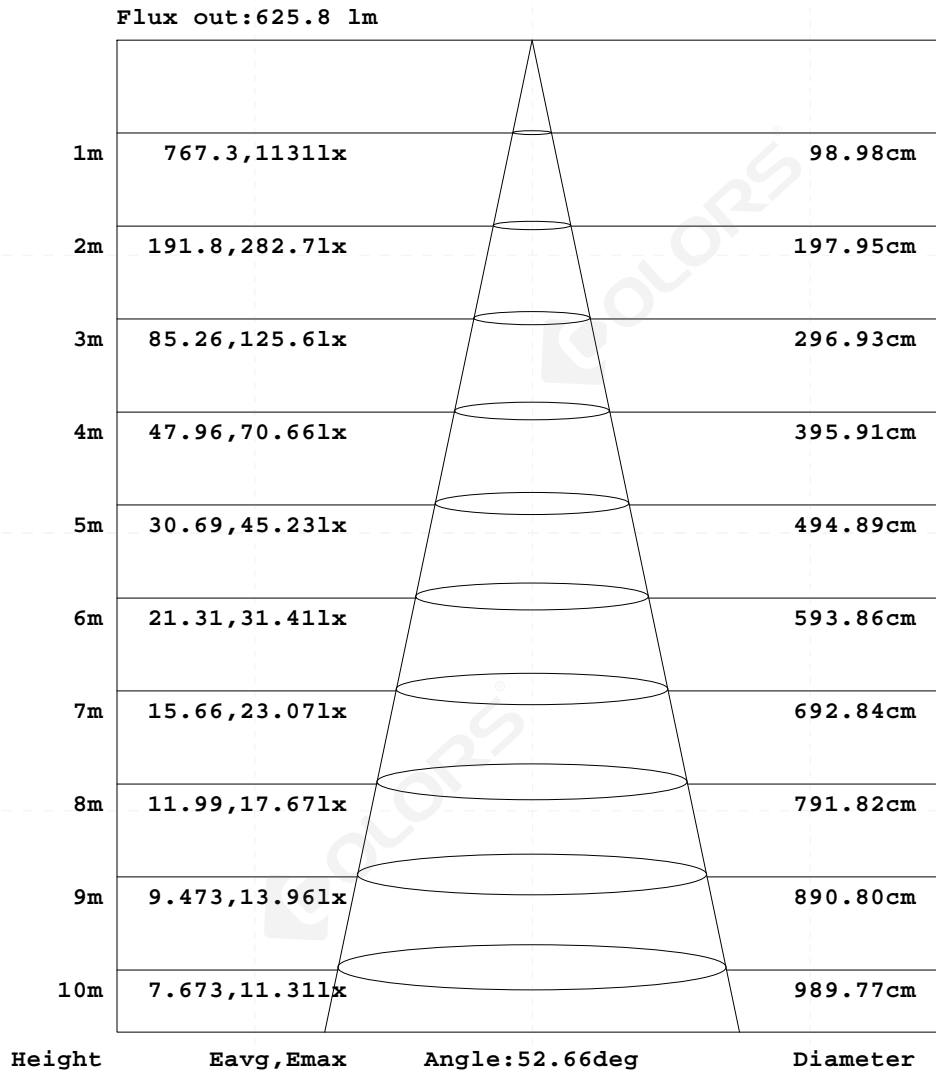
ISOCANDELA DIAGRAM



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

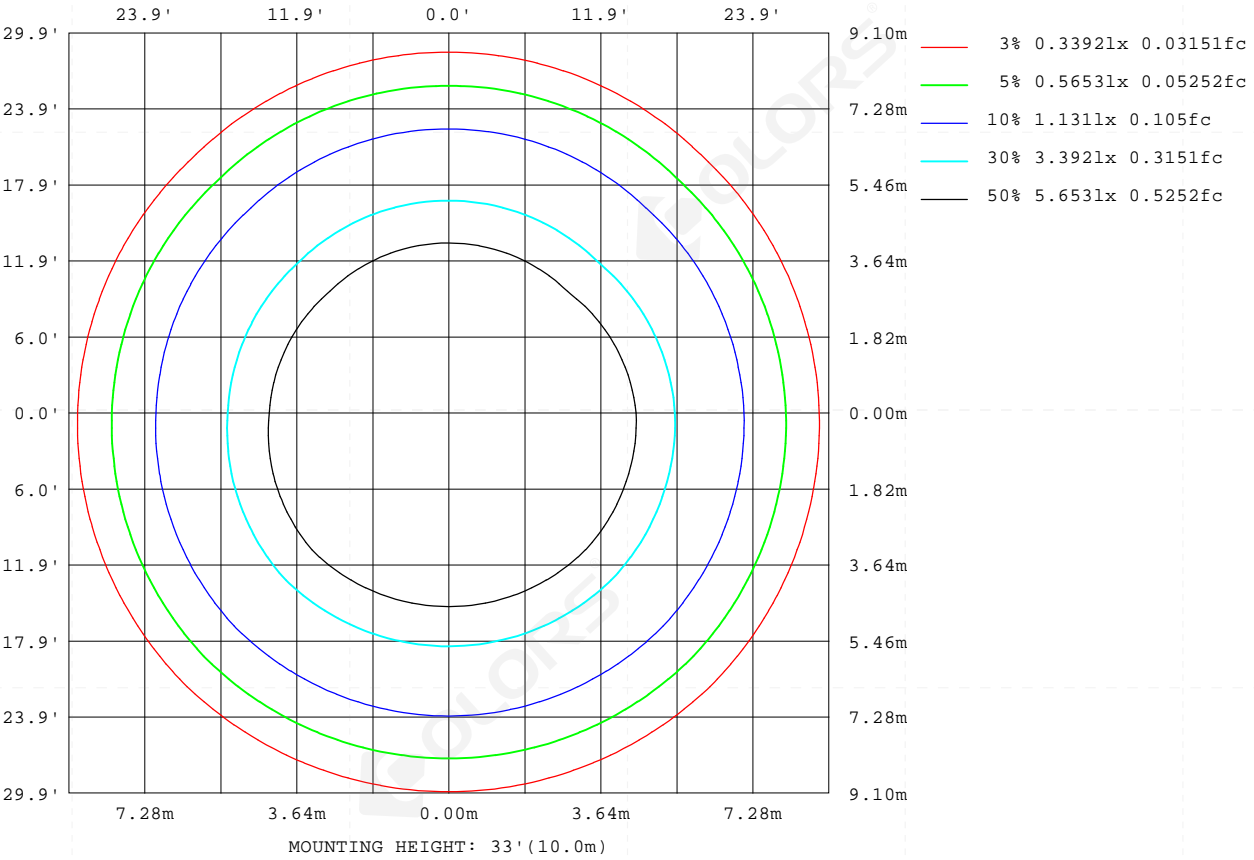


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

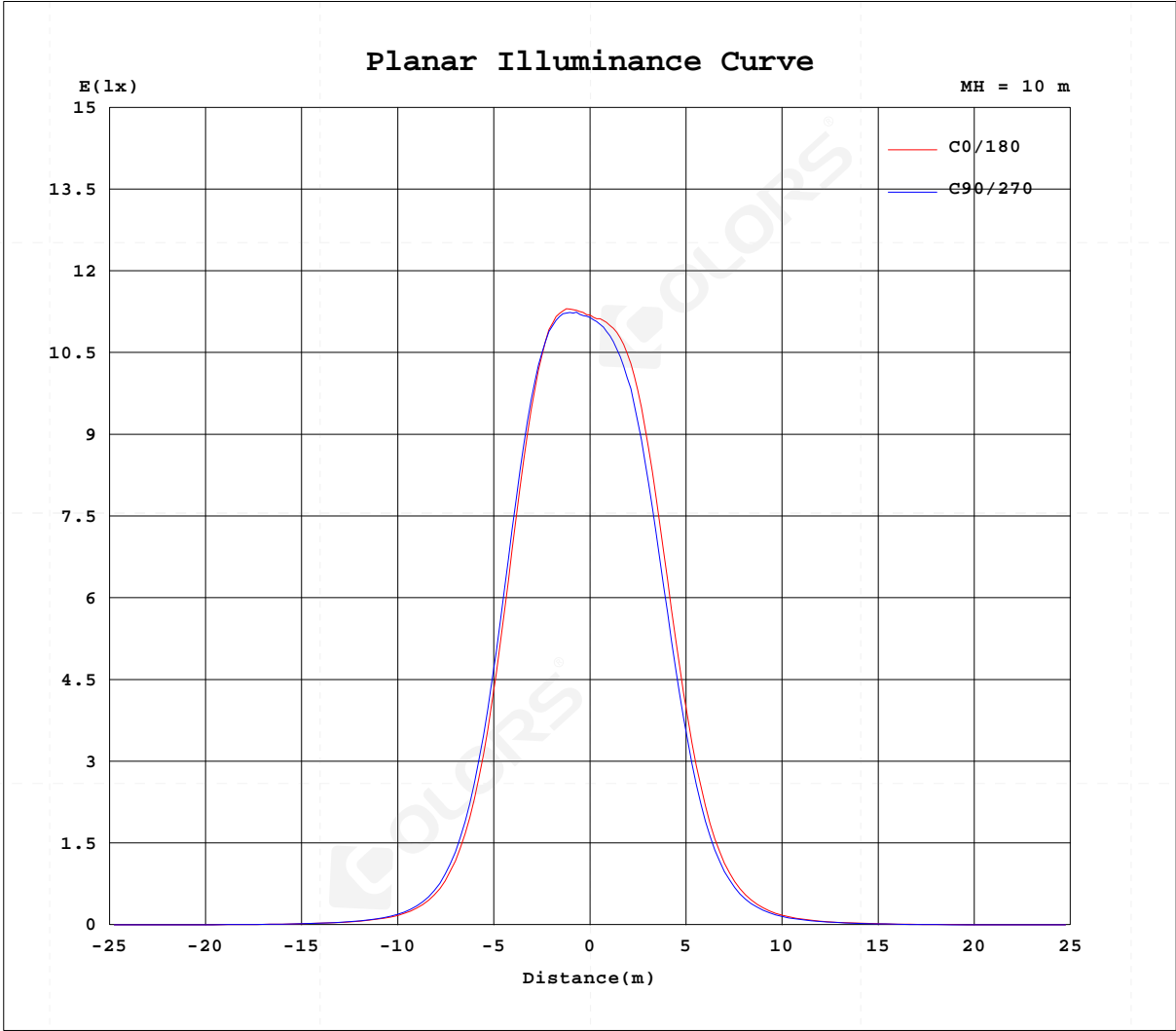
Test:U:48.00V I:0.2400A P:11.52W PF:1.000 Freq:0Hz Lamp Flux:930.229x1 lm		
NAME: FD-HM40SH52(T)-N930B12	TYPE:	WEIGHT:
SPEC.:	DIM.: 50mm	SERIAL No.:
MFR.: COLORS	SUR.:50mm	Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	4324
L_0~180(75)av	481
L_0~180(85)av	1462
L_90~270(65)av	4240
L_90~270(75)av	458
L_90~270(85)av	1377
L_45(65)av	4223
L_45(75)av	458
L_45(85)av	1496

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	1119	1115	1115	1112	1119	1115	1115	1112										
5	1142	1135	1136	1135	1118	1101	1102	1101										
10	1169	1162	1162	1162	1115	1075	1073	1073										
15	1129	1140	1140	1138	1053	988	987	986										
20	967	1003	1004	1002	886	813	808	809										
25	695	748	749	750	640	575	571	571										
30	415	463	465	466	391	347	341	343										
35	214	241	244	242	206	183	179	181										
40	102	115	116	116	102	88.6	87.5	87.8										
45	49.8	55.2	55.6	55.5	51.4	44.8	44.4	44.4										
50	27.1	29.3	29.5	29.5	27.5	24.7	24.6	24.6										
55	15.4	16.5	16.6	16.6	15.5	14.0	13.9	13.9										
60	8.16	8.83	8.85	8.86	7.94	7.11	7.08	7.06										
65	3.80	4.28	4.33	4.31	3.50	2.86	2.84	2.83										
70	0.81	1.05	1.10	1.08	0.69	0.53	0.47	0.51										
75	0.23	0.21	0.22	0.20	0.27	0.28	0.26	0.26										
80	0.23	0.22	0.21	0.22	0.27	0.29	0.26	0.26										
85	0.23	0.25	0.21	0.25	0.28	0.29	0.27	0.26										
90	0.29	0.30	0.28	0.29	0.31	0.29	0.31	0.27										
95	0.35	0.34	0.28	0.34	0.34	0.29	0.34	0.28										
100	0.45	0.43	0.37	0.42	0.39	0.36	0.40	0.36										
105	0.55	0.56	0.51	0.55	0.47	0.44	0.50	0.47										
110	0.83	0.79	0.73	0.78	0.63	0.67	0.67	0.63										
115	1.30	1.20	1.13	1.19	0.97	0.99	1.03	0.97										
120	2.17	1.95	1.89	1.93	1.55	1.62	1.69	1.63										
125	3.45	3.12	3.06	3.11	2.54	2.73	2.77	2.74										
130	5.24	4.74	4.66	4.71	3.96	4.22	4.27	4.23										
135	7.30	6.71	6.64	6.67	5.80	6.16	6.20	6.17										
140	9.57	8.96	8.87	8.91	8.05	8.49	8.52	8.49										
145	11.9	11.3	11.2	11.2	10.6	11.0	11.0	11.0										
150	14.3	13.7	13.7	13.7	13.1	13.5	13.5	13.5										
155	16.6	16.1	16.0	16.0	15.4	15.6	15.6	15.6										
160	18.6	18.2	18.1	18.2	17.3	17.2	17.3	17.3										
165	20.3	20.0	19.9	19.9	19.0	18.7	18.7	18.7										
170	21.8	21.5	21.4	21.4	20.6	20.1	20.2	20.1										
175	22.8	22.4	22.3	22.4	22.1	21.6	21.6	21.6										
180	23.1	22.7	22.6	22.6	23.1	22.6	22.7	22.6										

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

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