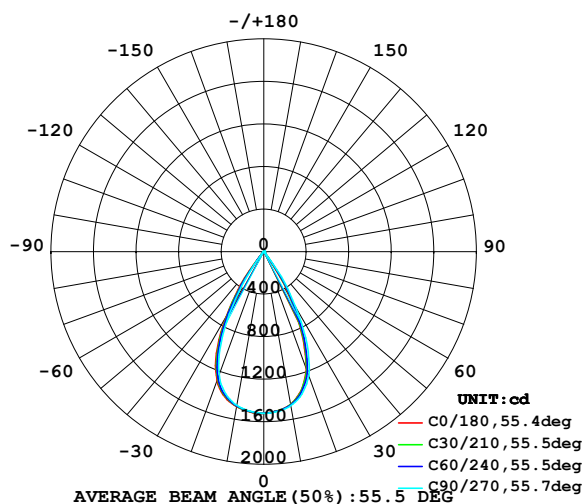


LUMINAIRE PHOTOMETRIC TEST REPORT

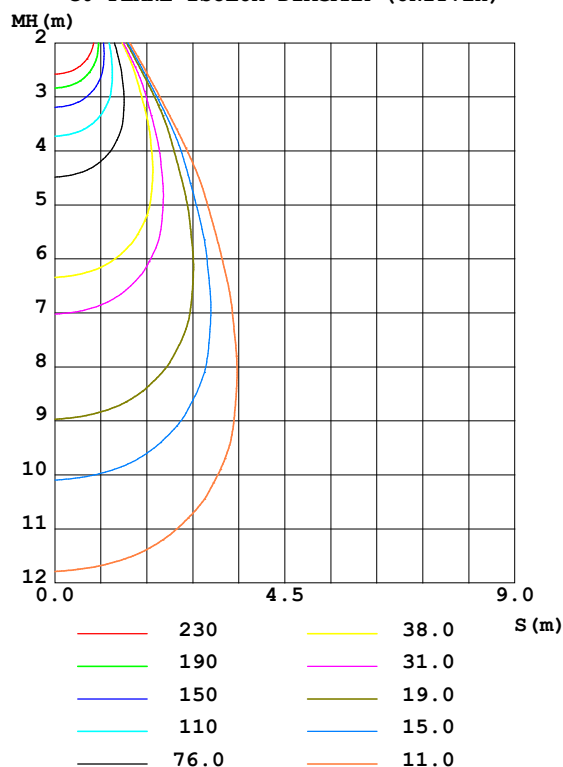
NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 93.10 lm/W			
MCR-3 (13W, 60°)		Imax(cd)	1524	S/MH(C0/180)	0.87
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	0.82
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1165.3	η UP,DN(C0-180)	0.7,49.4
NOMINAL FLUX(lm)	1165.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,49.4
LAMPS INSIDE	1	η up(%)	1.3	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	120	η down(%)	98.7	CIBSE SHR MAX	0.85

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



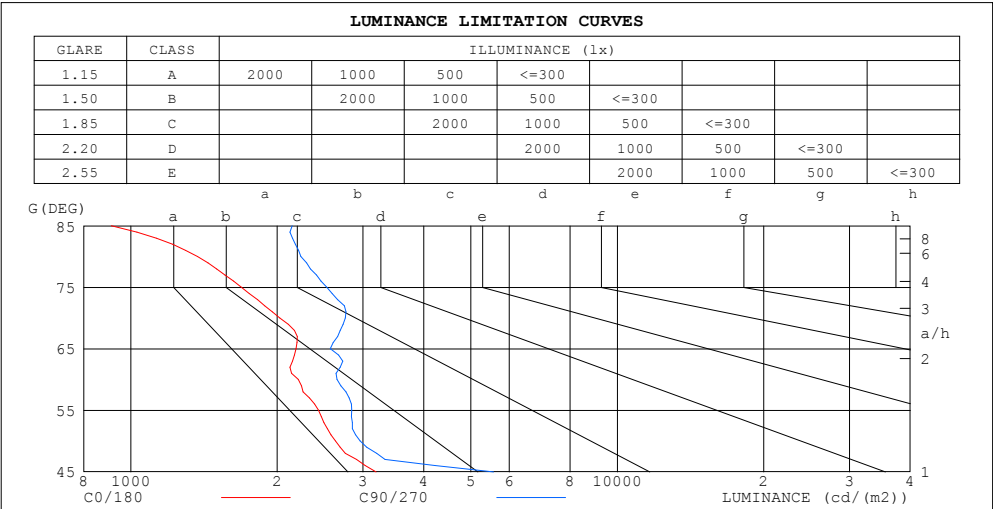
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

**ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1457	1461	1470	1477	1480	1473	1469	1459	0- 10	142.6	142.6	12.2,12.2
20	1170	1189	1241	1269	1285	1270	1230	1191	10- 20	385.8	528.4	45.3,45.3
30	485.6	525.7	600.4	677.1	715.2	679.6	588.1	512.0	20- 30	426.5	954.9	81.9,81.9
40	31.71	36.41	52.09	66.12	69.39	54.41	40.49	34.06	30- 40	167.0	1122	96.3,96.3
50	7.576	7.808	8.574	9.186	8.903	8.480	7.512	7.208	40- 50	14.85	1137	97.6,97.6
60	4.945	5.349	5.976	6.323	5.620	5.008	4.670	4.639	50- 60	6.028	1143	98.1,98.1
70	3.098	3.758	4.256	4.256	3.877	3.341	2.864	2.771	60- 70	4.338	1147	98.4,98.4
80	1.065	1.390	1.750	1.708	1.505	1.259	1.035	0.9237	70- 80	2.489	1150	98.7,98.7
90	0	0.0001	0.0672	0.0029	0	0.0070	0.0045	0.0045	80- 90	0.6251	1150	98.7,98.7
100	0.0580	0.0563	0.0814	0.0272	0.0002	0.0158	0.0181	0.0181	90-100	0.0117	1150	98.7,98.7
110	0.6226	0.5946	0.5469	0.4247	0.1169	0.1172	0.1577	0.2192	100-110	0.1589	1150	98.7,98.7
120	1.842	1.777	1.613	1.464	0.6917	0.7391	0.8568	0.9805	110-120	0.7310	1151	98.8,98.8
130	3.537	3.494	3.239	3.054	1.935	2.053	2.265	2.395	120-130	1.736	1153	98.9,98.9
140	5.461	5.407	5.203	4.956	3.676	3.783	3.990	4.170	130-140	2.817	1156	99.2,99.2
150	7.113	7.019	6.904	6.711	5.425	5.505	5.741	5.826	140-150	3.413	1159	99.5,99.5
160	7.895	7.854	7.851	7.703	6.721	6.753	6.916	6.942	150-160	3.165	1162	99.7,99.7
170	8.175	8.208	8.248	8.148	7.671	7.719	7.864	7.880	160-170	2.163	1164	99.9,99.9
180	8.460	8.522	8.533	8.535	8.464	8.519	8.524	8.539	170-180	0.7828	1165	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	912	2145
80	1370	2237
75	1687	2527
70	2024	2762
65	2185	2570
60	2210	2653
55	2430	2846
50	2633	2961
45	3195	5571

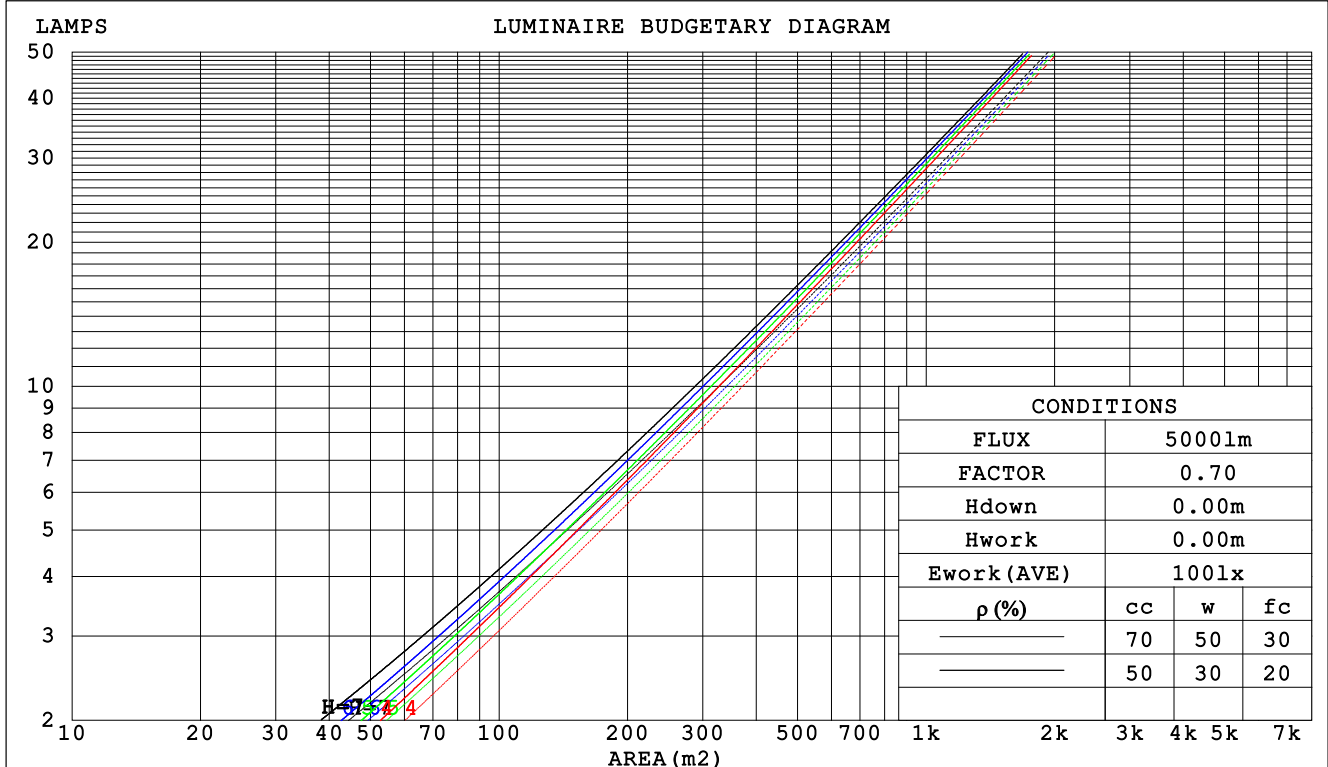
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.11	1.09	1.06	1.09	1.07	1.05	1.04	1.03	1.01	1.00	.99	.98	.97	.96	.95	.93
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.88	.86	.84	.82
4.0	.92	.87	.83	.90	.86	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.77
5.0	.86	.81	.77	.85	.80	.77	.84	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.82	.76	.72	.81	.76	.72	.79	.75	.71	.78	.74	.71	.76	.73	.70	.69
7.0	.77	.72	.68	.77	.71	.68	.75	.71	.67	.74	.70	.67	.73	.69	.66	.65
8.0	.73	.68	.64	.73	.67	.64	.72	.67	.63	.70	.66	.63	.69	.66	.63	.62
9.0	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.58
10.0	.66	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.63	.59	.57	.55



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Wall Exitance Coefficients(WEC)
0.0						
1.0	.169 .096 .030	.162 .092 .029	.149 .085 .027	.137 .079 .025	.125 .073 .023	
2.0	.160 .088 .027	.155 .085 .026	.143 .080 .025	.133 .075 .023	.124 .070 .022	
3.0	.152 .081 .024	.147 .079 .024	.138 .075 .023	.129 .071 .022	.120 .067 .021	
4.0	.145 .075 .022	.140 .073 .022	.132 .070 .021	.124 .067 .020	.117 .064 .019	
5.0	.138 .070 .020	.134 .069 .020	.127 .066 .019	.120 .063 .019	.114 .061 .018	
6.0	.131 .066 .019	.128 .065 .019	.122 .062 .018	.116 .060 .018	.110 .058 .017	
7.0	.126 .062 .018	.123 .061 .017	.117 .059 .017	.112 .057 .017	.107 .055 .016	
8.0	.120 .059 .017	.118 .058 .016	.113 .056 .016	.108 .055 .016	.103 .053 .015	
9.0	.116 .056 .016	.113 .055 .015	.109 .054 .015	.104 .052 .015	.100 .051 .015	
10.0	.111 .053 .015	.109 .053 .015	.105 .051 .014	.101 .050 .014	.097 .049 .014	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio					Ceiling Cavity Exitance Coefficients(CCEC)
0.0	.200 .200 .200	.171 .171 .171	.117 .117 .117	.067 .067 .067	.021 .021 .021	
1.0	.180 .167 .155	.154 .144 .134	.106 .099 .092	.061 .057 .054	.019 .018 .017	
2.0	.165 .142 .124	.141 .123 .107	.097 .085 .075	.056 .049 .044	.018 .016 .014	
3.0	.152 .123 .101	.130 .107 .088	.089 .074 .061	.052 .043 .036	.017 .014 .012	
4.0	.141 .109 .084	.121 .094 .073	.083 .065 .051	.048 .038 .030	.015 .012 .010	
5.0	.132 .097 .071	.113 .084 .062	.078 .059 .044	.045 .034 .026	.015 .011 .009	
6.0	.124 .088 .061	.107 .076 .053	.074 .053 .038	.043 .031 .022	.014 .010 .007	
7.0	.118 .080 .053	.101 .069 .046	.070 .049 .033	.041 .029 .020	.013 .009 .006	
8.0	.112 .074 .047	.097 .064 .041	.067 .045 .029	.039 .026 .017	.013 .009 .006	
9.0	.107 .068 .042	.092 .059 .037	.064 .042 .026	.037 .025 .016	.012 .008 .005	
10.0	.103 .064 .038	.088 .056 .033	.061 .039 .024	.036 .023 .014	.012 .008 .005	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.050m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

NAME: MCR-3 (13W, 60°)					TYPE:LED					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:1				
MFR.: Utopia Lighting					SUR.:					PROTECTION 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					15.1	16.0	15.4	16.2	16.4	16.5	17.3	16.7	17.5	17.7
3H					15.0	15.8	15.3	16.1	16.3	16.4	17.2	16.7	17.4	17.6
4H					15.0	15.7	15.3	16.0	16.2	16.4	17.1	16.6	17.3	17.6
6H					14.9	15.6	15.2	15.9	16.2	16.3	17.0	16.6	17.3	17.5
8H					14.9	15.6	15.2	15.8	16.1	16.3	17.0	16.6	17.2	17.5
12H					14.8	15.5	15.2	15.8	16.1	16.2	16.9	16.6	17.2	17.5
4H 2H					14.9	15.7	15.2	15.9	16.1	16.2	17.0	16.5	17.2	17.5
3H					14.9	15.5	15.2	15.8	16.1	16.2	16.8	16.5	17.1	17.4
4H					14.8	15.4	15.2	15.7	16.1	16.2	16.8	16.5	17.1	17.4
6H					14.8	15.3	15.2	15.6	16.0	16.1	16.7	16.5	17.0	17.4
8H					14.7	15.2	15.1	15.6	16.0	16.1	16.6	16.5	17.0	17.4
12H					14.7	15.1	15.1	15.5	15.9	16.1	16.5	16.5	16.9	17.3
8H 4H					14.7	15.2	15.1	15.6	16.0	16.0	16.5	16.5	16.9	17.3
6H					14.7	15.1	15.1	15.5	15.9	16.0	16.4	16.5	16.8	17.3
8H					14.7	15.0	15.1	15.4	15.9	16.0	16.4	16.5	16.8	17.3
12H					14.6	14.9	15.1	15.4	15.9	16.0	16.3	16.5	16.8	17.3
12H 4H					14.7	15.1	15.1	15.5	15.9	16.0	16.4	16.4	16.8	17.2
6H					14.6	15.0	15.1	15.4	15.9	16.0	16.3	16.5	16.8	17.2
8H					14.6	14.9	15.1	15.4	15.9	16.0	16.3	16.5	16.7	17.2
Variations with the observer position at spacings:														
S = 1.0H					+ 2.3 / - 2.0					+ 4.6 / - 3.7				
1.5H					+ 4.3 / - 2.0					+ 7.1 / - 3.6				
2.0H					+ 0.4 / - 0.5					+ 1.7 / - 0.3				

CIE Pub.117 Corrected 1165 lm Total Lamp Luminous Flux. (8log(F/F0) = 0.5)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:8.050m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

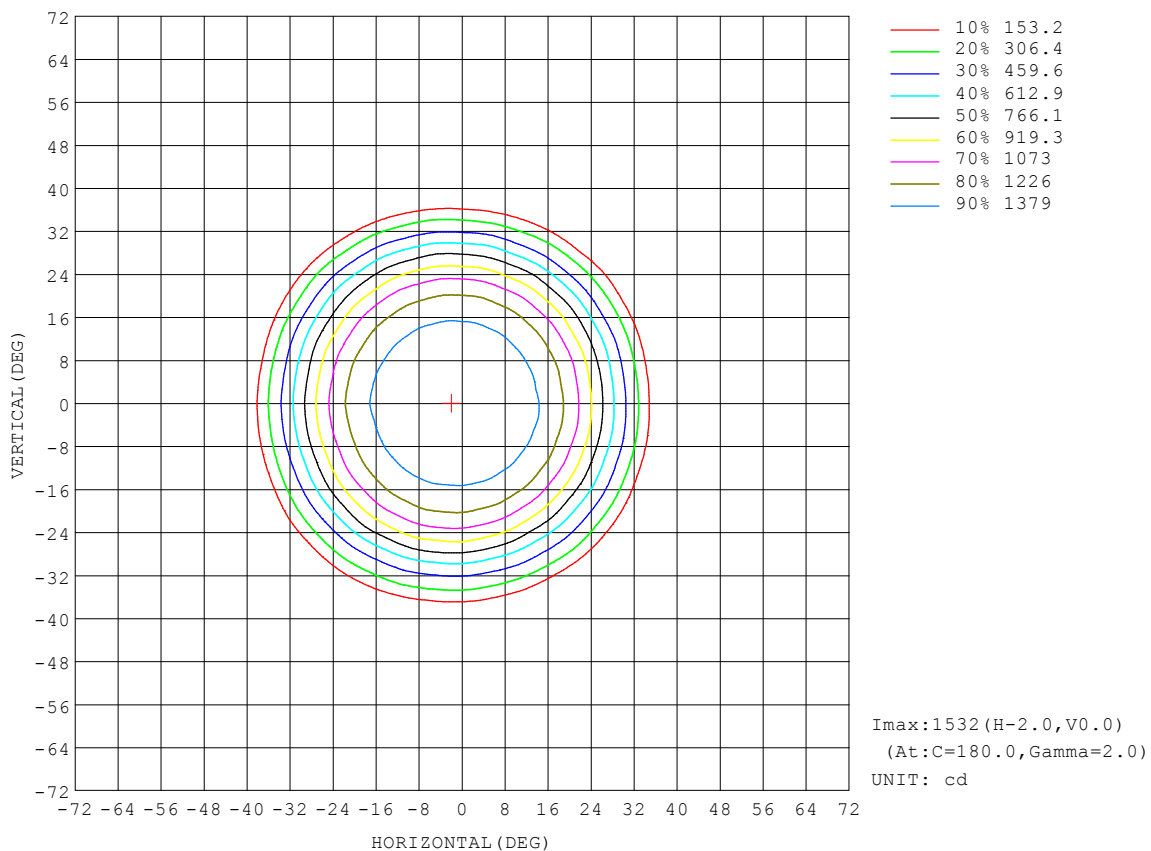
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	89	83	80	89	83	80	88	83	80	76
0.80	96	91	87	96	91	87	94	90	87	83
1.00	100	95	92	99	95	91	98	94	91	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	105	103	101	95
3.00	112	109	106	110	107	105	106	104	102	96
4.00	114	111	109	112	110	108	108	106	105	97
5.00	115	113	111	113	111	110	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 8.050m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

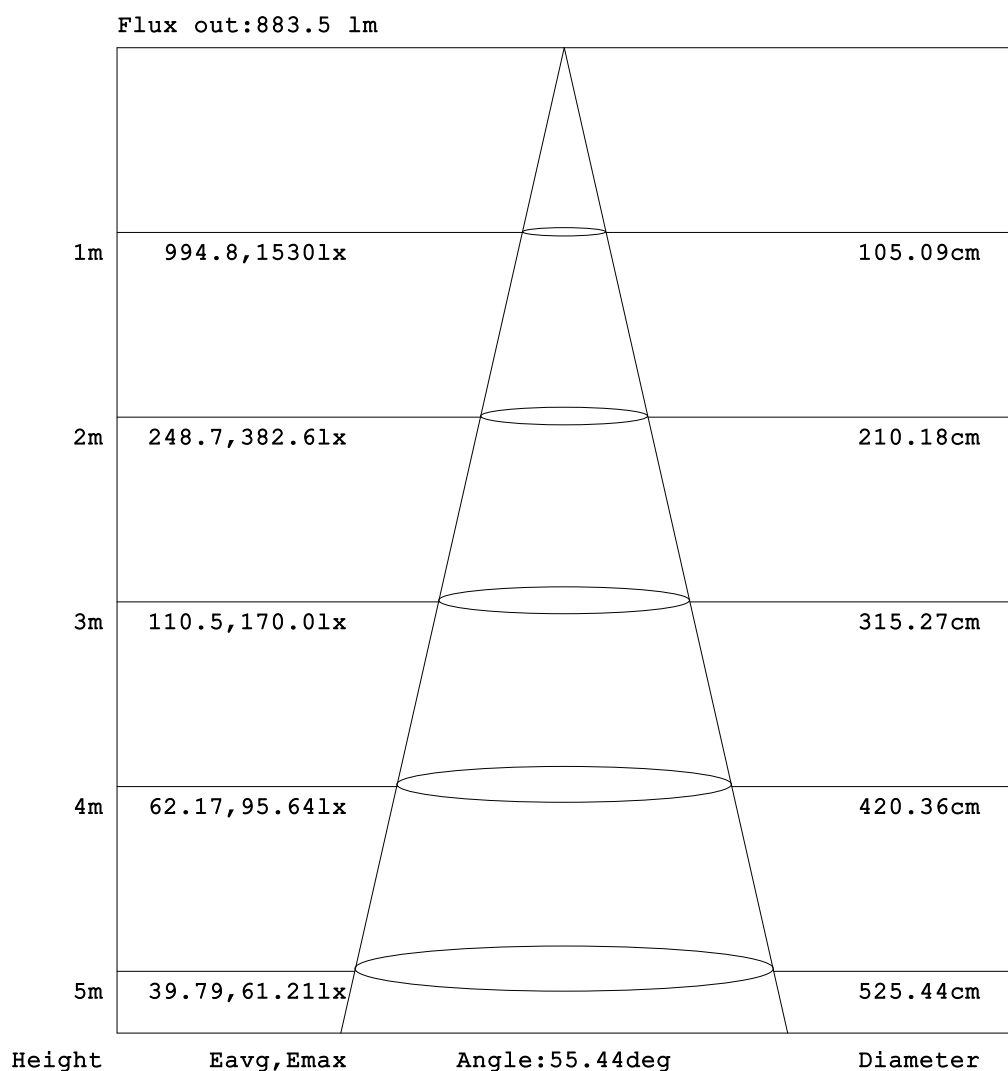


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

AAI Figure

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



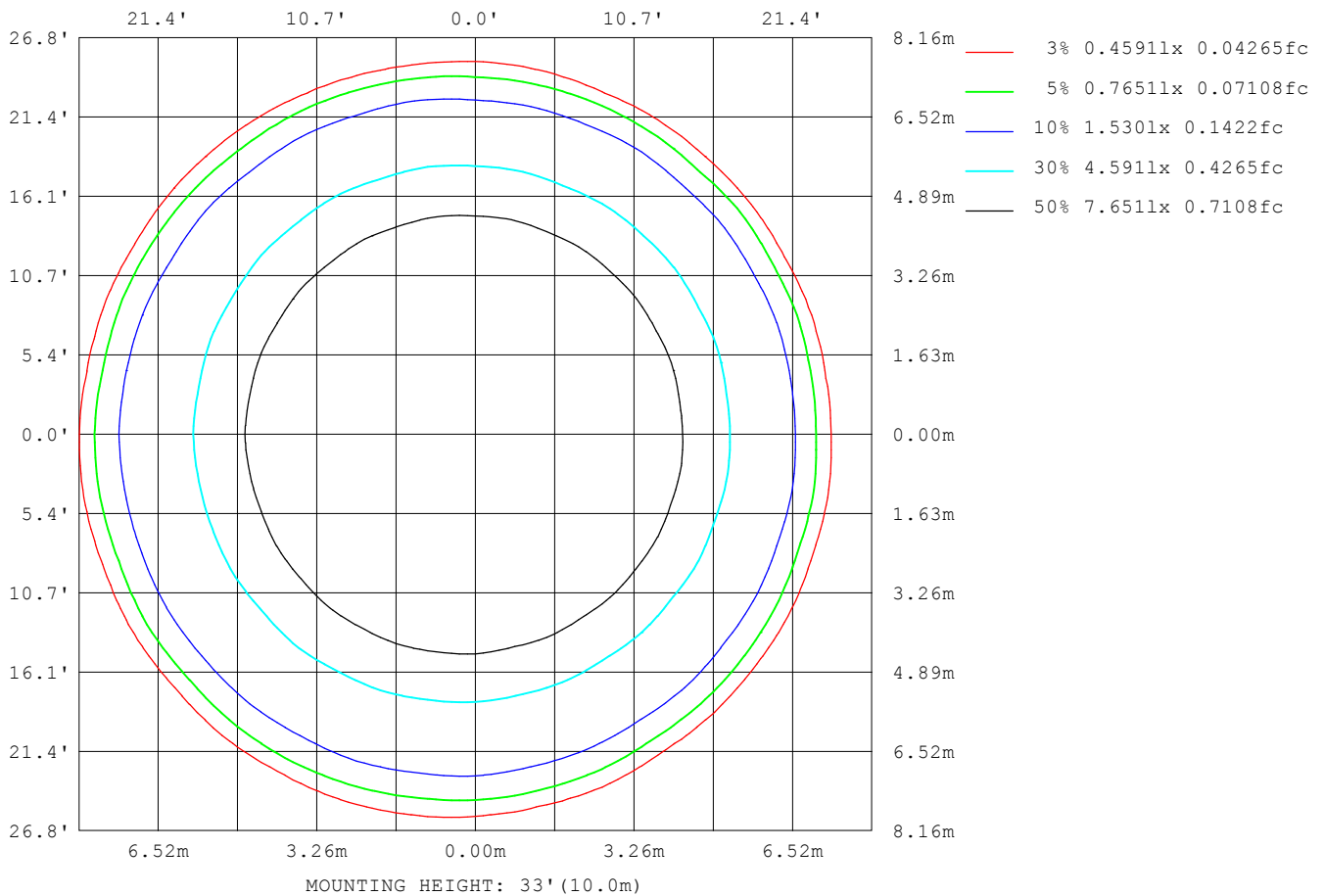
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 8.050m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2025-11-25

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 8.050m [K=1.0000]
 Remarks:

LED Avg.L Report

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

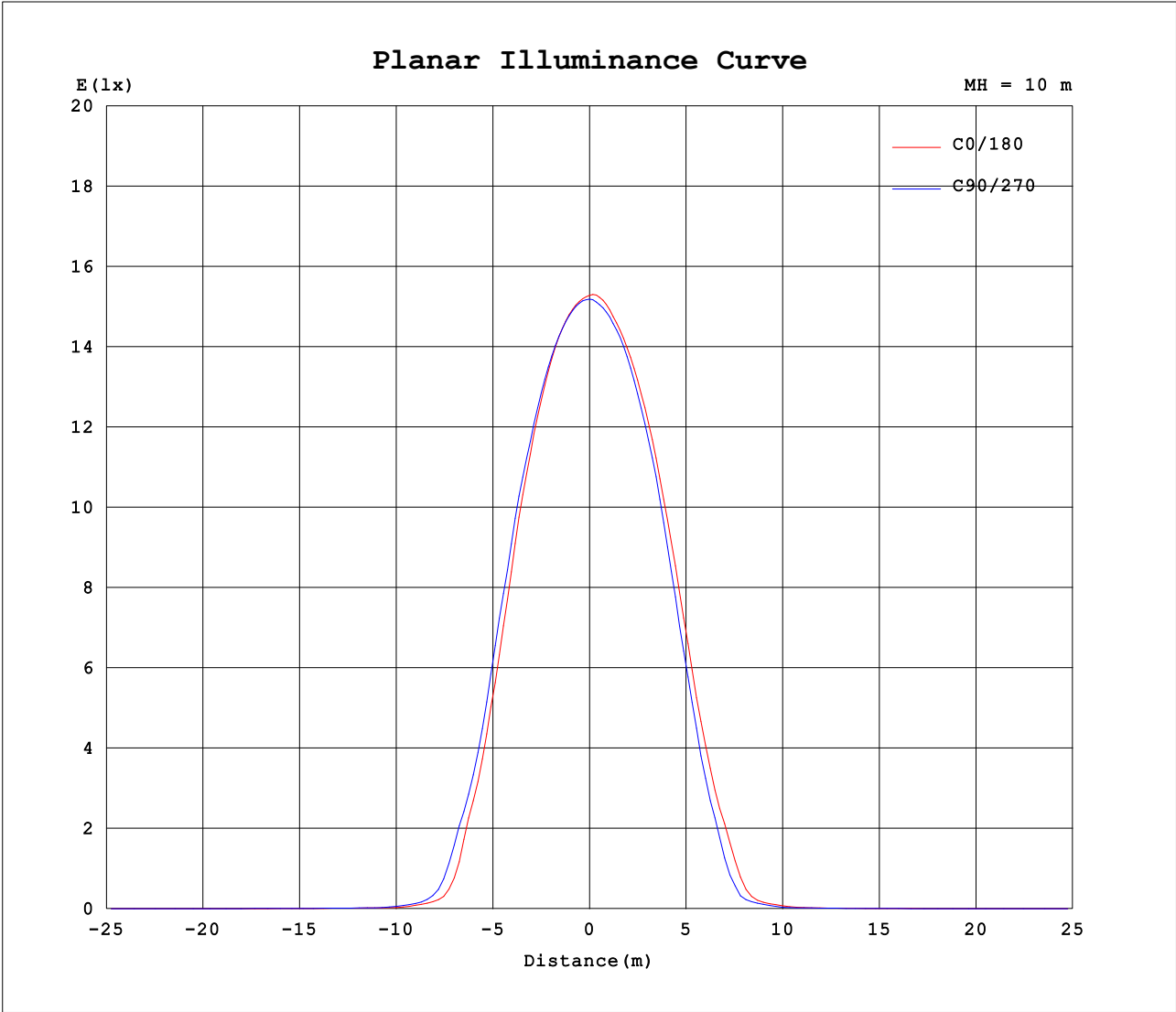
AvgL	cd/m2
L_0~180 (65) av	2279
L_0~180 (75) av	1947
L_0~180 (85) av	1309
L_90~270 (65) av	2268
L_90~270 (75) av	2049
L_90~270 (85) av	1588
L_45 (65) av	2287
L_45 (75) av	1981
L_45 (85) av	1202

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520
5	1502	1502	1501	1502	1502	1503	1504	1505	1506	1509	1510	1511	1511	1512	1511	1513	1513	1514	1515
10	1457	1458	1458	1459	1459	1462	1464	1467	1467	1470	1471	1474	1475	1478	1477	1480	1477	1480	1480
15	1356	1359	1355	1360	1361	1369	1370	1378	1381	1387	1390	1400	1403	1408	1408	1413	1412	1415	1416
20	1170	1174	1170	1179	1183	1196	1201	1219	1222	1241	1246	1259	1260	1270	1268	1277	1276	1282	1285
25	846	855	853	863	873	885	899	928	939	974	983	1009	1014	1032	1029	1042	1037	1049	1054
30	486	496	495	515	517	534	534	559	569	600	610	642	650	679	676	699	700	706	715
35	140	151	149	167	174	193	208	238	254	289	303	330	335	356	356	372	367	375	384
40	31.7	33.0	33.2	34.3	35.2	37.7	39.7	45.5	46.7	52.1	54.6	60.7	61.3	66.3	66.0	71.4	67.4	70.1	69.4
45	10.1	10.4	10.4	10.6	10.8	12.1	12.8	14.8	15.6	17.7	18.4	20.2	20.2	21.5	21.2	22.0	20.9	21.6	22.0
50	7.58	7.56	7.58	7.74	7.77	7.84	8.08	8.23	8.36	8.57	8.79	8.94	9.08	9.24	9.13	9.04	9.01	9.09	8.90
55	6.24	6.28	6.33	6.44	6.56	6.70	6.83	7.05	7.21	7.35	7.56	7.74	7.87	7.80	7.86	7.70	7.60	7.50	7.17
60	4.95	5.18	5.36	5.38	5.32	5.38	5.53	5.68	5.87	5.98	6.09	6.31	6.28	6.32	6.32	6.21	5.92	5.79	5.62
65	4.13	4.22	4.34	4.43	4.56	4.62	4.74	4.78	4.89	4.89	4.96	4.97	4.98	5.04	4.96	4.82	4.76	4.64	4.53
70	3.10	3.23	3.37	3.54	3.67	3.84	4.00	4.09	4.20	4.26	4.31	4.29	4.30	4.25	4.26	4.20	4.15	4.01	3.88
75	1.95	2.04	2.14	2.24	2.37	2.49	2.61	2.73	2.85	2.95	2.99	3.02	2.99	2.95	2.87	2.80	2.71	2.64	2.58
80	1.06	1.10	1.19	1.25	1.35	1.43	1.53	1.59	1.69	1.75	1.80	1.79	1.77	1.72	1.69	1.65	1.59	1.53	1.51
85	0.36	0.36	0.44	0.49	0.54	0.58	0.68	0.73	0.80	0.84	0.85	0.80	0.79	0.77	0.76	0.72	0.72	0.68	0.67
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.04	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00
95	0.01	0.02	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.06	0.09	0.06	0.09	0.04	0.07	0.03	0.06	0.01	0.08	0.06	0.07	0.04	0.05	0.00	0.04	0.00	0.04	0.00
105	0.29	0.29	0.28	0.27	0.22	0.25	0.20	0.23	0.20	0.24	0.20	0.21	0.19	0.19	0.13	0.15	0.13	0.15	0.04
110	0.62	0.65	0.62	0.63	0.58	0.60	0.55	0.57	0.58	0.55	0.50	0.50	0.45	0.46	0.39	0.41	0.37	0.40	0.12
115	1.17	1.18	1.14	1.14	1.10	1.10	1.08	1.09	1.04	1.03	0.98	0.97	0.94	0.88	0.84	0.84	0.81	0.83	0.32
120	1.84	1.85	1.82	1.81	1.79	1.77	1.71	1.68	1.64	1.61	1.56	1.55	1.50	1.48	1.44	1.44	1.43	1.42	0.69
125	2.64	2.64	2.61	2.62	2.58	2.58	2.50	2.46	2.40	2.37	2.32	2.29	2.24	2.22	2.18	2.17	2.14	2.13	1.24
130	3.54	3.55	3.55	3.54	3.50	3.49	3.44	3.39	3.31	3.24	3.21	3.18	3.12	3.07	3.03	3.02	3.01	2.98	1.94
135	4.50	4.51	4.51	4.49	4.44	4.44	4.40	4.35	4.28	4.23	4.17	4.11	4.05	4.01	3.97	3.96	3.93	3.91	2.77
140	5.46	5.49	5.46	5.46	5.40	5.41	5.38	5.31	5.25	5.20	5.13	5.09	5.02	4.98	4.94	4.92	4.90	4.88	3.68
145	6.35	6.36	6.33	6.32	6.27	6.25	6.27	6.21	6.15	6.12	6.06	6.01	5.95	5.92	5.88	5.86	5.83	5.82	4.58
150	7.11	7.12	7.07	7.07	7.03	7.01	6.97	6.95	6.92	6.90	6.85	6.80	6.76	6.72	6.70	6.67	6.64	6.64	5.43
155	7.66	7.67	7.62	7.60	7.56	7.56	7.52	7.55	7.50	7.51	7.43	7.41	7.35	7.34	7.30	7.31	7.29	7.32	6.17
160	7.89	7.93	7.87	7.89	7.84	7.87	7.86	7.87	7.83	7.85	7.78	7.77	7.72	7.72	7.68	7.72	7.74	7.73	6.72
165	8.05	8.10	8.07	8.05	8.00	8.06	8.02	8.06	8.02	8.05	7.99	7.98	7.93	7.95	7.90	7.95	7.94	7.96	7.19
170	8.18	8.22	8.17	8.22	8.18	8.23	8.23	8.25	8.22	8.25	8.19	8.19	8.14	8.16	8.14	8.18	8.13	8.16	7.67
175	8.30	8.34	8.32	8.38	8.37	8.43	8.43	8.44	8.38	8.41	8.38	8.41	8.36	8.40	8.38	8.38	8.31	8.31	8.11
180	8.46	8.47	8.47	8.51	8.52	8.53	8.51	8.53	8.53	8.53	8.53	8.54	8.54	8.54	8.53	8.50	8.47	8.47	8.46

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MCR-3 (13W, 60°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520		
5	1513	1512	1510	1511	1508	1509	1508	1507	1505	1505	1504	1503	1502	1501	1500	1501	1501		
10	1476	1477	1475	1474	1473	1474	1471	1472	1469	1468	1464	1463	1459	1460	1457	1456	1457		
15	1411	1412	1407	1408	1402	1400	1394	1393	1385	1384	1376	1376	1367	1365	1361	1362	1356		
20	1280	1284	1274	1276	1264	1262	1247	1244	1230	1227	1209	1206	1192	1189	1178	1181	1172		
25	1040	1046	1027	1030	1005	1006	980	975	947	944	917	911	893	889	868	866	853		
30	702	710	689	694	666	668	635	624	588	589	544	541	512	512	492	498	483		
35	363	367	344	349	313	306	275	266	231	219	197	186	158	168	148	150	139		
40	61.1	61.6	57.9	57.8	51.0	48.8	45.0	42.8	40.5	39.5	37.6	36.3	34.4	33.7	31.8	32.1	31.7		
45	21.1	20.7	19.3	19.5	16.6	19.9	18.5	13.5	12.1	11.7	10.5	10.5	9.98	9.83	9.85	9.89	10.1		
50	8.89	8.57	8.49	8.56	8.40	9.01	8.35	7.82	7.51	7.42	7.38	7.35	7.23	7.18	7.23	7.43	7.56		
55	6.98	6.83	6.84	6.72	6.54	6.55	6.65	6.28	6.24	6.01	5.96	5.96	6.06	6.06	6.04	6.06	6.16		
60	5.70	5.66	5.43	5.15	4.87	4.81	4.80	4.70	4.67	4.46	4.39	4.43	4.57	4.71	4.79	4.72	4.78		
65	4.43	4.28	4.20	4.06	3.99	3.88	3.84	3.74	3.73	3.67	3.70	3.68	3.76	3.78	3.90	3.95	4.06		
70	3.77	3.63	3.51	3.39	3.29	3.19	3.07	2.98	2.86	2.80	2.76	2.74	2.75	2.79	2.84	2.91	3.00		
75	2.49	2.41	2.32	2.22	2.13	2.04	1.96	1.87	1.83	1.76	1.74	1.70	1.71	1.71	1.78	1.81	1.89		
80	1.47	1.41	1.37	1.28	1.24	1.15	1.12	1.05	1.03	0.97	0.97	0.91	0.93	0.92	0.96	0.97	1.03		
85	0.66	0.64	0.60	0.34	0.25	0.40	0.45	0.39	0.40	0.35	0.32	0.29	0.30	0.28	0.30	0.29	0.34		
90	0.04	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00		
95	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01		
100	0.01	0.01	0.00	0.02	0.01	0.02	0.00	0.03	0.02	0.06	0.02	0.05	0.01	0.03	0.00	0.03	0.01		
105	0.00	0.04	0.00	0.04	0.01	0.05	0.01	0.06	0.06	0.10	0.07	0.11	0.08	0.09	0.04	0.08	0.04		
110	0.09	0.12	0.08	0.13	0.10	0.15	0.14	0.21	0.16	0.23	0.21	0.24	0.21	0.23	0.20	0.23	0.21		
115	0.28	0.33	0.31	0.35	0.34	0.38	0.42	0.47	0.46	0.51	0.50	0.49	0.48	0.52	0.50	0.53	0.50		
120	0.68	0.72	0.70	0.75	0.73	0.79	0.78	0.85	0.86	0.90	0.93	0.96	0.96	1.00	0.99	1.01	0.99		
125	1.23	1.26	1.29	1.30	1.37	1.41	1.39	1.45	1.47	1.52	1.53	1.59	1.60	1.63	1.64	1.65	1.64		
130	1.96	1.99	1.97	2.01	2.09	2.18	2.21	2.24	2.26	2.32	2.31	2.37	2.37	2.42	2.44	2.44	2.43		
135	2.81	2.83	2.81	2.85	2.94	3.04	3.08	3.10	3.13	3.18	3.20	3.24	3.24	3.28	3.31	3.31	3.32		
140	3.70	3.74	3.72	3.77	3.80	3.95	3.99	4.01	3.99	4.08	4.10	4.14	4.15	4.19	4.20	4.22	4.23		
145	4.59	4.63	4.63	4.66	4.68	4.81	4.85	4.89	4.92	4.97	4.98	5.02	5.03	5.07	5.07	5.10	5.11		
150	5.41	5.44	5.45	5.50	5.51	5.57	5.62	5.70	5.74	5.77	5.76	5.80	5.80	5.85	5.86	5.89	5.90		
155	6.15	6.18	6.15	6.20	6.19	6.26	6.28	6.36	6.38	6.42	6.42	6.43	6.42	6.48	6.49	6.53	6.57		
160	6.69	6.73	6.70	6.76	6.75	6.79	6.80	6.88	6.92	6.96	6.93	6.95	6.93	6.96	6.95	7.00	7.00		
165	7.18	7.22	7.19	7.22	7.21	7.28	7.27	7.36	7.37	7.42	7.39	7.43	7.40	7.42	7.39	7.45	7.44		
170	7.68	7.71	7.69	7.73	7.71	7.75	7.77	7.84	7.86	7.92	7.89	7.91	7.87	7.89	7.86	7.88	7.86		
175	8.11	8.18	8.18	8.23	8.23	8.25	8.22	8.27	8.25	8.31	8.32	8.34	8.30	8.30	8.23	8.26	8.21		
180	8.43	8.49	8.50	8.52	8.52	8.53	8.53	8.54	8.52	8.53	8.52	8.54	8.54	8.54	8.47	8.47	8.48		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks: