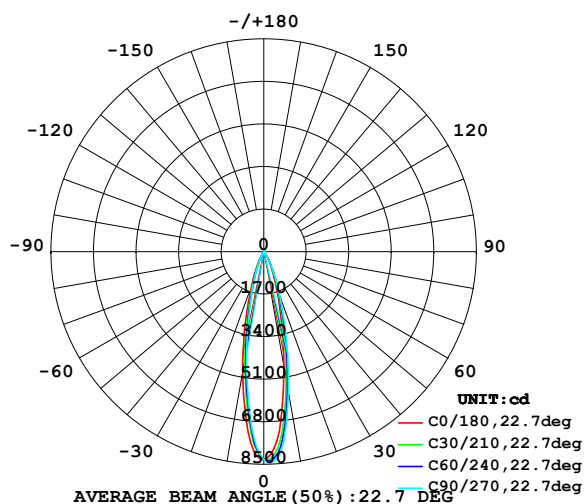


LUMINAIRE PHOTOMETRIC TEST REPORT

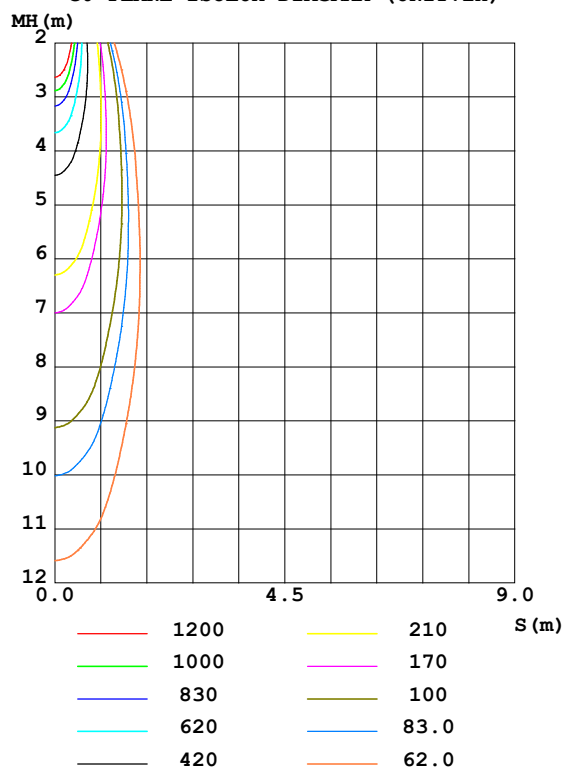
NAME: MCR-3 (16W, 24°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110.00 lm/W			
MCR-3 (16W, 24°)		Imax(cd)	8422	S/MH(C0/180)	0.39
NOMINAL POWER(W)	16	LOR(%)	100.0	S/MH(C90/270)	0.33
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1832.8	η UP,DN(C0-180)	0.7,56.3
NOMINAL FLUX(lm)	1832.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,42.4
LAMPS INSIDE	1	η up(%)	1.3	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	120	η down(%)	98.7	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



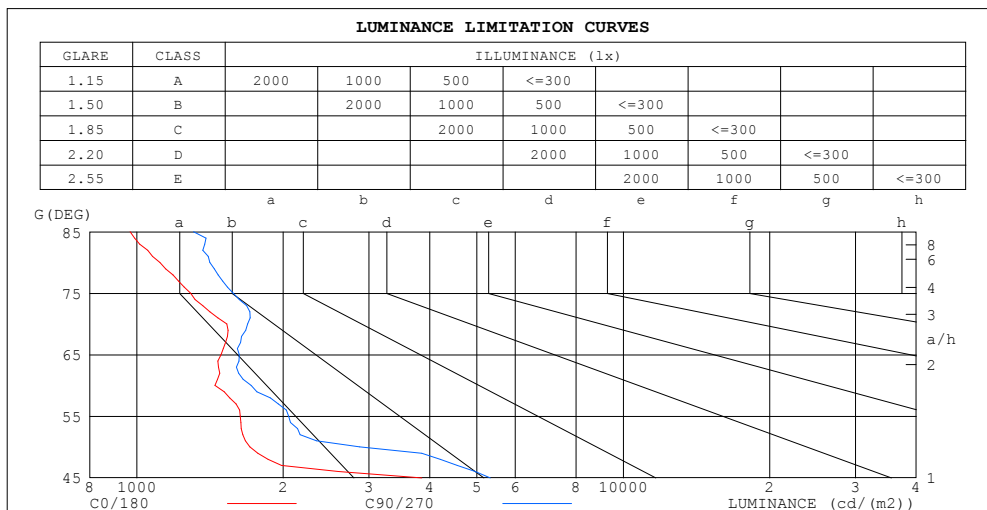
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

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	4658	5338	5706	5409	4874	4265	3965	4189	0- 10	606.5	606.5	33.1,33.1
20	1422	1716	1834	1658	1391	1095	1038	1181	10- 20	759.1	1366	74.5,74.5
30	394.7	463.6	473.3	378.8	269.3	202.3	222.0	296.5	20- 30	342.9	1709	93.2,93.2
40	27.00	40.15	45.79	23.21	16.23	13.24	13.95	17.82	30- 40	82.33	1791	97.7,97.7
50	4.923	5.740	8.323	5.677	5.164	4.873	4.704	4.675	40- 50	9.028	1800	98.2,98.2
60	3.249	3.637	3.873	3.749	3.686	3.445	3.199	3.120	50- 60	3.877	1804	98.4,98.4
70	2.349	2.459	2.606	2.709	2.574	2.251	2.111	2.148	60- 70	2.921	1807	98.6,98.6
80	0.8690	0.9864	1.106	1.037	0.8892	0.7407	0.7146	0.7455	70- 80	1.680	1808	98.7,98.7
90	0.0409	0.0274	0.0719	0.0227	0.0270	0.0315	0.0317	0.0294	80- 90	0.4137	1809	98.7,98.7
100	0.0180	0.0315	0.0498	0.0294	0.0585	0.0607	0.0632	0.0452	90-100	0.0347	1809	98.7,98.7
110	0.2291	0.2003	0.2216	0.2643	0.1533	0.1735	0.1669	0.1356	100-110	0.1018	1809	98.7,98.7
120	1.315	1.051	1.008	1.193	0.6665	0.7702	0.7624	0.6464	110-120	0.4716	1809	98.7,98.7
130	4.541	3.888	3.663	4.008	2.342	2.716	2.820	2.515	120-130	1.695	1811	98.8,98.8
140	9.540	8.835	8.596	8.938	6.405	7.105	7.349	6.858	130-140	4.201	1815	99,99
150	13.15	12.73	12.62	12.81	11.35	11.82	12.01	11.62	140-150	6.391	1822	99.4,99.4
160	14.33	14.20	14.20	14.16	13.72	13.55	13.54	13.35	150-160	6.142	1828	99.7,99.7
170	12.71	12.90	13.01	12.73	12.57	12.05	11.87	11.82	160-170	3.807	1832	99.9,99.9
180	11.31	11.35	11.13	11.12	11.33	11.33	11.08	11.10	170-180	1.121	1833	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	969	1307
80	1115	1413
75	1291	1579
70	1531	1690
65	1490	1624
60	1448	1719
55	1631	2053
50	1707	2873
45	3851	5331

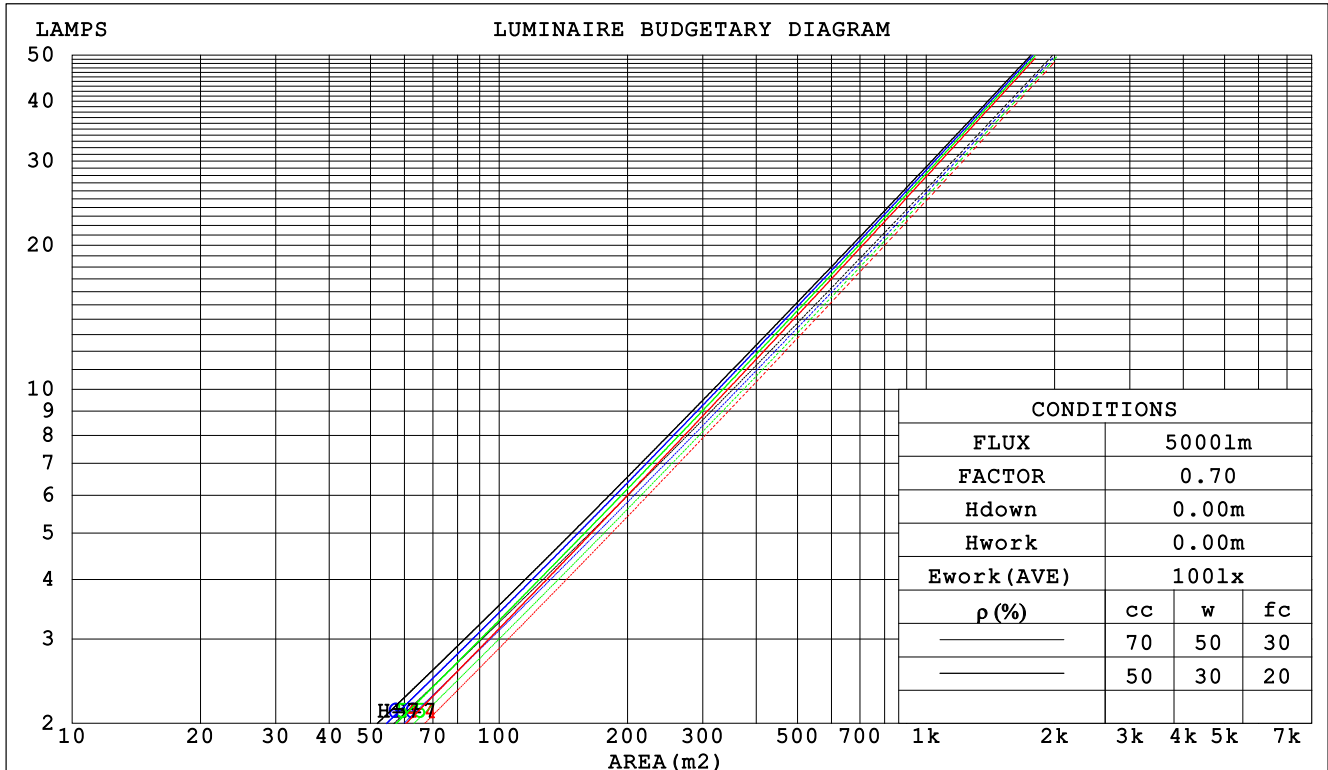
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

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 (16W, 24°)	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	1.12	1.10	1.09	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.07	1.04	1.01	1.05	1.02	.00	1.02	.00	.98	.99	.97	.95	.96	.94	.93	.92
3.0	1.02	.98	.95	1.01	.97	.95	.98	.95	.93	.96	.93	.91	.93	.91	.90	.88
4.0	.98	.94	.91	.97	.93	.90	.95	.91	.89	.93	.90	.88	.91	.88	.87	.85
5.0	.94	.90	.87	.93	.89	.86	.91	.88	.85	.90	.87	.85	.88	.86	.84	.83
6.0	.91	.86	.83	.90	.86	.83	.88	.85	.82	.87	.84	.82	.86	.83	.81	.80
7.0	.88	.83	.80	.87	.83	.80	.86	.82	.79	.84	.81	.79	.83	.81	.79	.77
8.0	.85	.80	.77	.84	.80	.77	.83	.79	.77	.82	.79	.76	.81	.78	.76	.75
9.0	.82	.78	.75	.82	.78	.75	.81	.77	.74	.80	.77	.74	.79	.76	.74	.73
10.0	.80	.75	.73	.79	.75	.73	.78	.75	.72	.78	.74	.72	.77	.74	.72	.71



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 (16W, 24°)	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	.141 .080 .025	.134 .077 .024	.121 .069 .022	.109 .063 .020	.098 .057 .018	
2.0	.131 .072 .022	.125 .069 .021	.114 .064 .020	.104 .059 .018	.095 .054 .017	
3.0	.122 .065 .020	.118 .063 .019	.108 .059 .018	.100 .055 .017	.092 .051 .016	
4.0	.115 .060 .018	.111 .058 .017	.103 .055 .016	.096 .051 .015	.089 .048 .015	
5.0	.108 .055 .016	.105 .054 .016	.098 .051 .015	.092 .048 .014	.086 .046 .014	
6.0	.103 .051 .015	.100 .050 .014	.094 .048 .014	.088 .046 .013	.083 .044 .013	
7.0	.098 .048 .014	.095 .047 .013	.090 .045 .013	.085 .044 .013	.080 .042 .012	
8.0	.093 .045 .013	.091 .045 .013	.086 .043 .012	.082 .041 .012	.078 .040 .012	
9.0	.089 .043 .012	.087 .042 .012	.083 .041 .012	.079 .040 .011	.075 .038 .011	
10.0	.085 .041 .011	.083 .040 .011	.080 .039 .011	.076 .038 .011	.073 .037 .011	

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	.179 .168 .158	.153 .144 .136	.105 .099 .094	.060 .057 .055	.019 .018 .018	
2.0	.161 .143 .128	.138 .123 .110	.094 .085 .077	.054 .049 .045	.017 .016 .015	
3.0	.146 .123 .105	.125 .107 .091	.086 .074 .064	.050 .043 .038	.016 .014 .012	
4.0	.134 .108 .089	.115 .093 .077	.079 .065 .054	.046 .038 .032	.015 .012 .011	
5.0	.124 .096 .076	.106 .083 .066	.073 .058 .046	.042 .034 .028	.014 .011 .009	
6.0	.115 .086 .065	.099 .075 .057	.068 .052 .040	.040 .031 .024	.013 .010 .008	
7.0	.107 .078 .057	.092 .068 .050	.064 .047 .035	.037 .028 .021	.012 .009 .007	
8.0	.101 .071 .051	.087 .062 .044	.060 .043 .031	.035 .026 .019	.011 .008 .006	
9.0	.096 .066 .046	.082 .057 .040	.057 .040 .028	.033 .024 .017	.011 .008 .006	
10.0	.091 .061 .041	.078 .053 .036	.054 .037 .026	.032 .022 .015	.010 .007 .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 (16W, 24°)					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					13.2	13.8	13.4	14.0	14.2	13.6	14.3	13.9	14.5	14.7
3H					13.1	13.7	13.3	13.9	14.1	13.5	14.2	13.8	14.4	14.6
4H					13.0	13.6	13.3	13.8	14.1	13.5	14.1	13.8	14.3	14.5
6H					12.9	13.5	13.2	13.7	14.0	13.4	14.0	13.7	14.2	14.5
8H					12.9	13.4	13.2	13.7	14.0	13.4	13.9	13.7	14.2	14.5
12H					12.9	13.4	13.2	13.7	13.9	13.4	13.9	13.7	14.2	14.4
4H 2H					13.0	13.5	13.2	13.8	14.0	13.4	14.0	13.7	14.3	14.5
3H					12.8	13.4	13.2	13.6	13.9	13.3	13.8	13.6	14.1	14.4
4H					12.8	13.3	13.1	13.6	13.9	13.3	13.7	13.6	14.1	14.4
6H					12.7	13.1	13.1	13.5	13.9	13.2	13.6	13.6	14.0	14.3
8H					12.7	13.1	13.1	13.4	13.8	13.2	13.6	13.6	13.9	14.3
12H					12.6	13.0	13.1	13.4	13.8	13.1	13.5	13.6	13.9	14.3
8H 4H					12.7	13.0	13.1	13.4	13.8	13.1	13.5	13.5	13.9	14.3
6H					12.6	12.9	13.0	13.3	13.8	13.1	13.4	13.5	13.8	14.3
8H					12.5	12.8	13.0	13.3	13.7	13.0	13.3	13.5	13.8	14.2
12H					12.5	12.7	13.0	13.2	13.7	13.0	13.3	13.5	13.7	14.2
12H 4H					12.6	13.0	13.0	13.4	13.8	13.1	13.4	13.5	13.8	14.2
6H					12.5	12.8	13.0	13.3	13.7	13.0	13.3	13.5	13.7	14.2
8H					12.5	12.7	13.0	13.2	13.7	13.0	13.2	13.5	13.7	14.2
Variations with the observer position at spacings:														
S = 1.0H					+ 3.4 / - 3.8					+ 4.3 / - 6.2				
1.5H					+ 5.7 / - 3.8					+ 6.9 / - 5.9				
2.0H					+ 2.4 / - 0.8					+ 3.0 / - 0.9				

CIE Pub.117 Corrected 1833 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.1)

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 (16W, 24°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

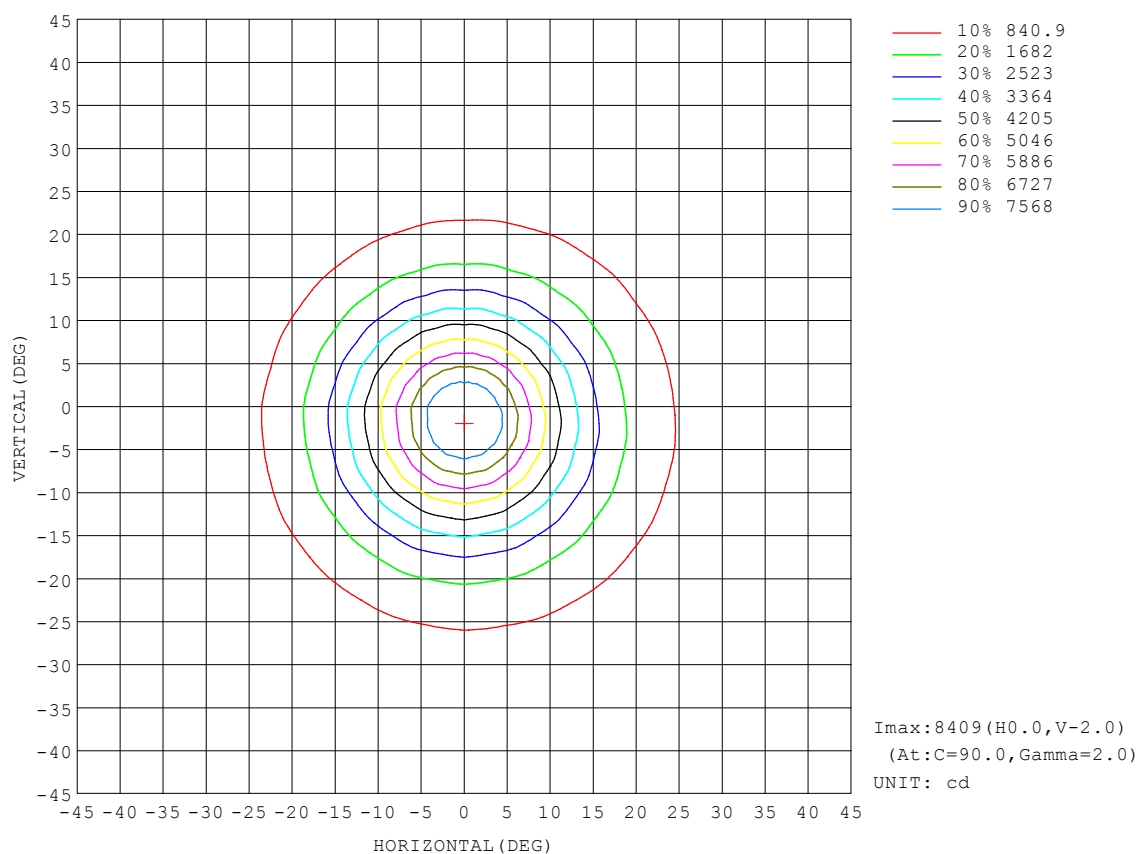
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	81	77
0.80	97	92	89	96	92	88	95	91	88	84
1.00	101	96	93	100	95	92	98	95	92	88
1.25	105	100	97	103	99	96	101	98	95	91
1.50	107	103	100	106	102	99	103	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	112	109	112	110	108	108	106	105	98
5.00	115	113	112	113	111	110	109	108	107	99
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 (16W, 24°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

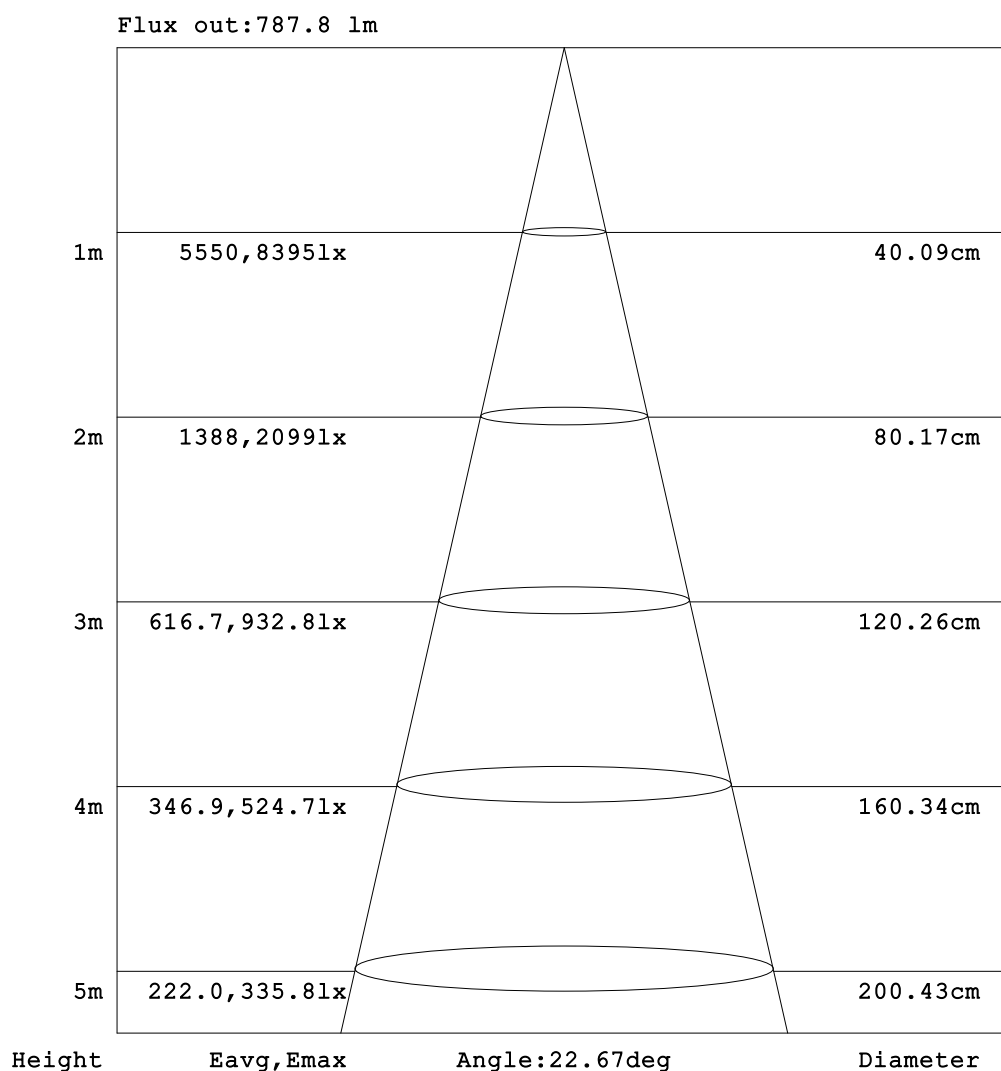


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

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 (16W, 24°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



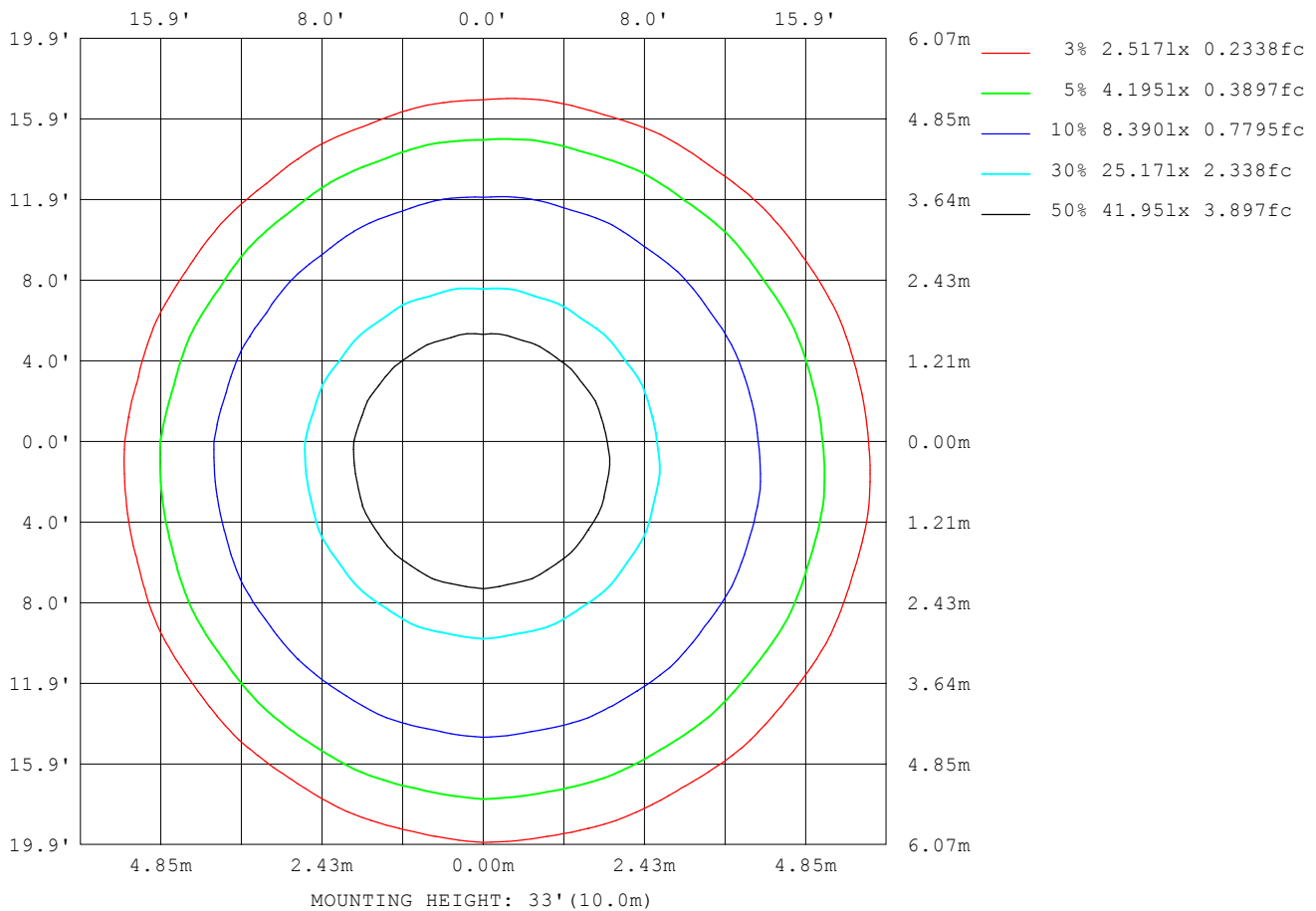
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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 (16W, 24°)	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 (16W, 24°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

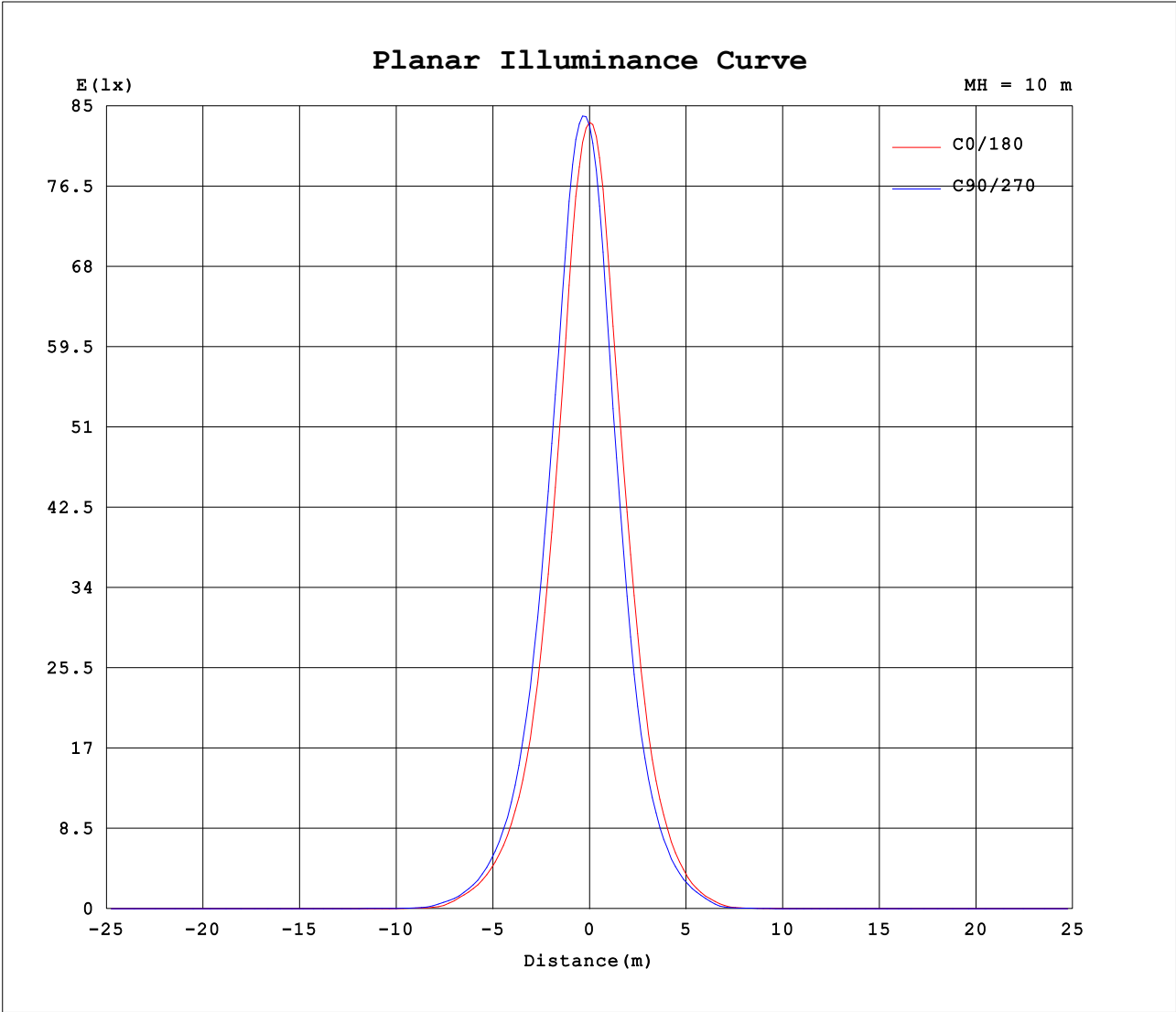
AvgL	cd/m2
L_0~180 (65) av	1587
L_0~180 (75) av	1338
L_0~180 (85) av	883
L_90~270 (65) av	1549
L_90~270 (75) av	1363
L_90~270 (85) av	978
L_45 (65) av	1549
L_45 (75) av	1342
L_45 (85) av	881

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 (16W, 24°)	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	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303
5	7193	7379	7444	7595	7644	7790	7811	7923	7909	7981	7915	7944	7827	7785	7616	7562	7386	7313	7226
10	4658	4855	4961	5174	5238	5438	5481	5625	5591	5706	5613	5667	5520	5500	5318	5251	5055	4962	4874
15	2652	2823	2877	3065	3092	3235	3262	3380	3348	3436	3365	3408	3293	3272	3132	3122	2930	2859	2786
20	1422	1522	1553	1651	1666	1766	1761	1831	1801	1834	1789	1809	1724	1704	1612	1587	1466	1427	1391
25	779	829	844	893	902	939	939	967	946	961	932	927	879	862	816	793	722	693	667
30	395	422	431	454	456	471	465	479	470	473	451	442	411	399	359	340	306	288	269
35	156	181	196	210	208	212	204	209	202	201	187	175	157	146	132	121	95.4	77.1	62.2
40	27.0	30.1	31.4	36.3	37.8	42.5	41.9	47.2	44.7	45.8	38.5	34.8	27.7	24.8	21.6	20.0	18.2	17.1	16.2
45	12.2	14.3	15.1	16.6	17.2	17.8	17.8	17.8	17.2	17.0	16.1	15.2	14.5	13.7	13.0	11.9	10.6	9.63	8.44
50	4.92	5.05	5.16	5.38	5.58	5.90	6.07	6.14	7.05	8.32	7.03	6.02	5.82	5.76	5.59	5.50	5.28	5.19	5.16
55	4.20	4.19	4.29	4.31	4.42	4.45	4.59	4.68	4.90	5.31	5.08	4.68	4.62	4.51	4.50	4.49	4.45	4.40	4.44
60	3.25	3.28	3.29	3.41	3.56	3.71	3.79	3.81	3.82	3.87	3.88	3.89	3.88	3.77	3.73	3.69	3.70	3.68	3.69
65	2.82	2.79	2.85	2.81	2.91	2.94	3.00	3.01	3.07	3.09	3.15	3.14	3.18	3.15	3.19	3.18	3.21	3.18	3.21
70	2.35	2.36	2.43	2.44	2.47	2.45	2.52	2.52	2.62	2.61	2.67	2.67	2.72	2.69	2.72	2.68	2.68	2.59	2.57
75	1.50	1.51	1.58	1.58	1.66	1.68	1.76	1.78	1.83	1.84	1.87	1.85	1.86	1.80	1.80	1.72	1.70	1.62	1.62
80	0.87	0.86	0.92	0.91	0.98	0.99	1.06	1.05	1.11	1.11	1.14	1.09	1.10	1.04	1.04	0.97	0.97	0.89	0.89
85	0.38	0.35	0.41	0.39	0.45	0.44	0.50	0.49	0.52	0.51	0.54	0.50	0.51	0.43	0.43	0.37	0.39	0.32	0.31
90	0.04	0.01	0.04	0.01	0.04	0.01	0.04	0.00	0.05	0.07	0.07	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.03
95	0.02	0.03	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.03	0.04
100	0.02	0.04	0.01	0.04	0.02	0.04	0.03	0.04	0.03	0.05	0.03	0.05	0.02	0.04	0.02	0.05	0.03	0.05	0.06
105	0.07	0.10	0.06	0.09	0.06	0.09	0.06	0.09	0.07	0.10	0.06	0.10	0.08	0.12	0.08	0.12	0.12	0.15	0.08
110	0.23	0.25	0.21	0.22	0.20	0.20	0.18	0.20	0.18	0.22	0.21	0.24	0.22	0.27	0.26	0.32	0.30	0.35	0.15
115	0.60	0.58	0.52	0.51	0.46	0.47	0.44	0.47	0.45	0.49	0.49	0.53	0.52	0.57	0.58	0.66	0.67	0.73	0.32
120	1.32	1.24	1.16	1.11	1.07	1.03	1.00	1.00	0.99	1.01	1.03	1.07	1.10	1.17	1.22	1.27	1.34	1.43	0.67
125	2.59	2.42	2.35	2.23	2.17	2.08	2.06	1.99	2.01	2.00	2.05	2.07	2.15	2.21	2.32	2.39	2.52	2.61	1.28
130	4.54	4.30	4.22	4.03	3.96	3.82	3.80	3.70	3.71	3.66	3.74	3.76	3.88	3.93	4.09	4.17	4.37	4.46	2.34
135	7.02	6.76	6.65	6.44	6.35	6.19	6.15	6.05	6.07	6.02	6.10	6.10	6.22	6.27	6.46	6.55	6.79	6.89	4.06
140	9.54	9.32	9.20	9.00	8.92	8.75	8.72	8.62	8.63	8.60	8.67	8.65	8.79	8.86	9.02	9.11	9.33	9.45	6.41
145	11.6	11.5	11.4	11.2	11.1	11.0	11.0	10.9	10.9	10.9	10.9	11.0	11.1	11.1	11.2	11.3	11.5	11.6	9.03
150	13.1	13.0	12.9	12.8	12.8	12.7	12.7	12.6	12.6	12.6	12.7	12.7	12.7	12.8	12.9	12.9	13.0	13.1	11.3
155	14.1	14.0	13.9	13.9	13.8	13.8	13.7	13.7	13.7	13.8	13.7	13.8	13.8	13.8	13.8	13.9	13.9	14.1	13.0
160	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.1	14.2	14.2	14.2	14.2	14.1	14.2	14.3	13.7
165	13.8	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.8	13.8	13.8	13.8	13.8	13.8	13.5
170	12.7	12.8	12.8	12.9	12.9	12.9	12.9	13.0	13.0	13.0	13.0	12.9	12.8	12.7	12.7	12.7	12.7	12.6	12.6
175	11.5	11.5	11.6	11.6	11.8	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.7	11.6	11.6	11.5	11.4	11.2	11.4
180	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.0	10.9	10.9	11.3

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
γ 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 (16W, 24°)	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	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303	8303		
5	7055	6995	6820	6785	6640	6631	6522	6554	6491	6563	6549	6667	6672	6815	6851	7028	7100		
10	4670	4594	4404	4344	4187	4162	4033	4039	3965	4022	4003	4107	4118	4259	4302	4483	4554		
15	2591	2515	2342	2307	2184	2173	2086	2108	2053	2111	2093	2185	2200	2315	2358	2509	2566		
20	1304	1253	1155	1124	1066	1067	1032	1050	1038	1068	1072	1124	1145	1217	1258	1336	1369		
25	600	574	519	519	488	493	486	503	505	531	537	577	594	636	656	714	738		
30	234	227	210	207	198	202	201	214	222	239	247	270	280	313	327	357	373		
35	45.4	40.8	34.1	32.8	29.5	29.4	29.0	32.5	34.2	40.8	44.0	54.2	59.5	80.0	93.3	121	142		
40	14.8	14.2	13.5	13.4	13.1	13.4	13.4	13.7	14.0	14.8	15.3	16.3	17.2	18.5	19.6	22.1	24.0		
45	7.09	6.73	6.43	6.31	6.22	6.31	6.23	6.08	5.93	5.98	6.03	6.15	6.22	6.51	7.12	9.15	10.6		
50	5.08	4.96	4.92	4.87	4.88	4.79	4.76	4.67	4.70	4.66	4.68	4.63	4.69	4.66	4.73	4.70	4.80		
55	4.42	4.31	4.25	4.17	4.14	4.08	4.05	3.99	4.01	4.01	4.02	4.04	4.08	4.06	4.12	4.11	4.18		
60	3.65	3.55	3.56	3.45	3.44	3.31	3.28	3.17	3.20	3.14	3.19	3.13	3.14	3.10	3.15	3.14	3.22		
65	3.21	3.11	3.11	3.00	2.98	2.88	2.88	2.81	2.80	2.72	2.74	2.67	2.72	2.68	2.74	2.72	2.78		
70	2.49	2.41	2.35	2.27	2.23	2.16	2.15	2.10	2.11	2.08	2.12	2.10	2.14	2.15	2.20	2.22	2.29		
75	1.58	1.51	1.49	1.42	1.40	1.34	1.35	1.30	1.33	1.30	1.34	1.32	1.37	1.38	1.41	1.42	1.48		
80	0.89	0.81	0.81	0.73	0.75	0.69	0.71	0.67	0.71	0.68	0.73	0.72	0.76	0.73	0.80	0.78	0.85		
85	0.33	0.26	0.28	0.21	0.24	0.19	0.23	0.20	0.25	0.21	0.25	0.23	0.29	0.27	0.33	0.29	0.37		
90	0.03	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.02	0.04	0.03	0.05		
95	0.03	0.04	0.02	0.04	0.03	0.04	0.04	0.04	0.06	0.05	0.03	0.04	0.04	0.04	0.04	0.04	0.04		
100	0.05	0.06	0.02	0.05	0.07	0.06	0.04	0.07	0.06	0.08	0.04	0.06	0.04	0.05	0.04	0.05	0.04		
105	0.08	0.09	0.06	0.09	0.08	0.10	0.07	0.11	0.07	0.10	0.07	0.09	0.05	0.07	0.06	0.08	0.08		
110	0.13	0.18	0.14	0.18	0.16	0.21	0.17	0.20	0.17	0.19	0.14	0.18	0.14	0.14	0.10	0.12	0.08		
115	0.32	0.36	0.36	0.39	0.36	0.39	0.38	0.40	0.37	0.38	0.36	0.35	0.28	0.30	0.29	0.25	0.21		
120	0.68	0.73	0.73	0.77	0.77	0.79	0.78	0.79	0.76	0.76	0.72	0.71	0.65	0.64	0.58	0.55	0.49		
125	1.33	1.39	1.43	1.47	1.51	1.52	1.52	1.53	1.52	1.49	1.45	1.41	1.36	1.29	1.22	1.15	1.08		
130	2.44	2.52	2.63	2.67	2.76	2.78	2.83	2.81	2.82	2.75	2.74	2.64	2.58	2.45	2.38	2.24	2.16		
135	4.23	4.31	4.49	4.54	4.69	4.70	4.82	4.75	4.81	4.70	4.70	4.54	4.50	4.30	4.21	4.01	3.91		
140	6.64	6.72	6.96	7.01	7.20	7.19	7.34	7.26	7.35	7.21	7.23	7.02	6.98	6.74	6.66	6.41	6.30		
145	9.27	9.34	9.56	9.61	9.79	9.79	9.93	9.86	9.95	9.80	9.82	9.62	9.59	9.36	9.28	9.03	8.94		
150	11.5	11.6	11.7	11.8	11.9	11.9	12.0	12.0	12.0	11.9	11.9	11.7	11.7	11.5	11.5	11.3	11.2		
155	13.1	13.1	13.1	13.1	13.2	13.2	13.2	13.2	13.2	13.2	13.1	13.1	13.0	12.9	12.9	12.8	12.8		
160	13.7	13.7	13.6	13.6	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.3	13.4	13.3	13.4	13.4	13.4		
165	13.5	13.4	13.3	13.1	13.1	13.0	12.9	12.9	13.0	12.9	12.9	12.9	12.9	12.9	12.9	13.0	13.1		
170	12.5	12.4	12.3	12.1	12.0	11.8	11.8	11.8	11.9	11.9	11.9	11.8	11.8	11.8	11.9	11.9	12.0		
175	11.4	11.4	11.4	11.3	11.2	11.1	11.1	11.0	11.0	11.0	11.1	11.0	11.0	10.9	10.9	10.8	10.9		
180	11.3	11.3	11.3	11.3	11.3	11.3	11.2	11.1	11.1	11.1	11.0	11.1	11.1	11.1	11.0	10.9	10.9		

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: