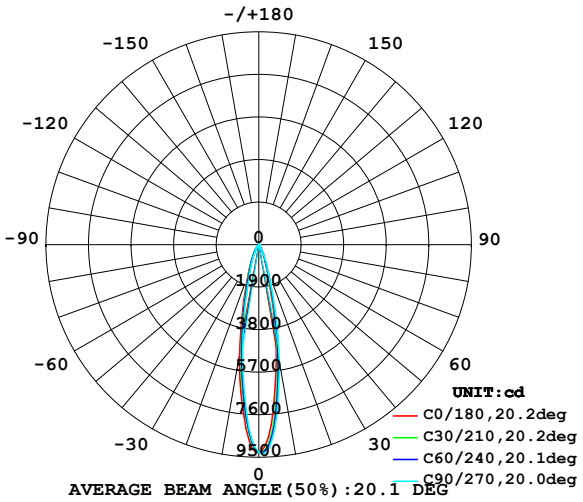
LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: MCR-3 (16W, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

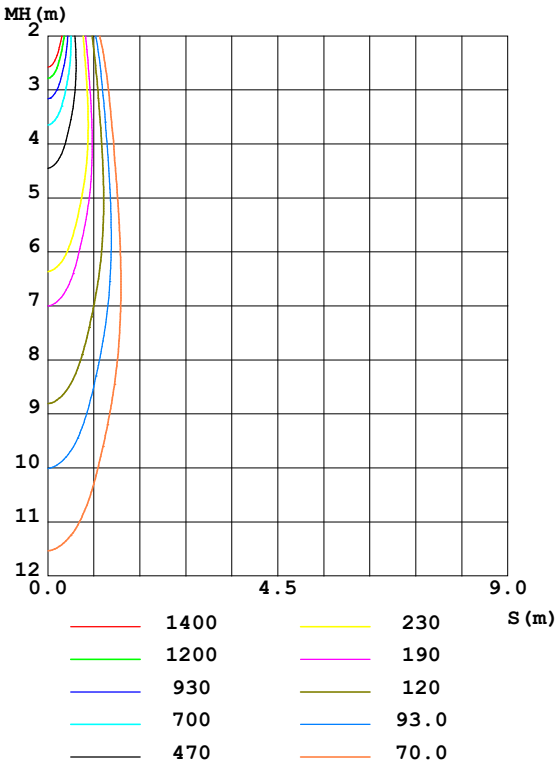
DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.33 lm/W			
MCR-3 (16W, 15°)		Imax(cd)	9347	S/MH(C0/180)	0.36
NOMINAL POWER(W)	16	LOR(%)	100.0	S/MH(C90/270)	0.31
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1719.9	η UP,DN(C0-180)	0.7,51.6
NOMINAL FLUX(lm)	1719.95	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,47.1
LAMPS INSIDE	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



AVERAGE BEAM ANGLE(50%):20.1 DEG

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:

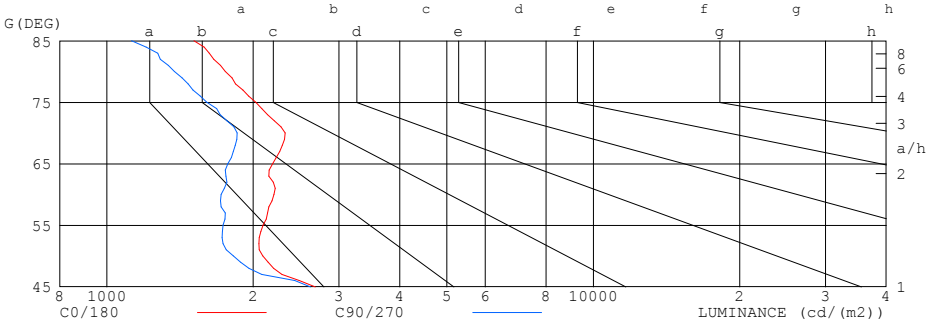
ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	4472	4936	5280	5213	4951	4465	4100	4168	0- 10	629.7	629.7	36.6,36.6
20	950.8	1055	1206	1297	1347	1222	1035	943.9	10- 20	660.5	1290	75,75
30	252.9	283.9	341.3	391.5	440.4	407.6	321.7	271.6	20- 30	295.5	1586	92.2,92.2
40	14.69	15.60	17.36	18.14	24.03	20.73	15.60	14.14	30- 40	94.85	1680	97.7,97.7
50	6.032	5.790	5.272	4.648	4.466	4.484	4.935	5.618	40- 50	7.073	1688	98.1,98.1
60	4.947	4.506	3.870	3.398	3.161	3.184	3.699	4.414	50- 60	3.994	1692	98.3,98.3
70	3.564	3.396	2.857	2.406	2.235	2.335	2.702	3.189	60- 70	3.344	1695	98.5,98.5
80	1.363	1.295	1.078	0.9286	0.8521	0.8871	1.044	1.231	70- 80	2.003	1697	98.7,98.7
90	0.0276	0.0161	0.0136	0.0228	0.0270	0.0294	0.0409	0.0273	80- 90	0.5260	1697	98.7,98.7
100	0.0447	0.0472	0.0498	0.0384	0.0495	0.0428	0.0316	0.0385	90-100	0.0320	1697	98.7,98.7
110	0.3989	0.3692	0.3166	0.2530	0.1259	0.1171	0.1171	0.1445	100-110	0.1157	1698	98.7,98.7
120	1.489	1.389	1.189	1.044	0.4722	0.4999	0.5548	0.6259	110-120	0.4860	1698	98.7,98.7
130	4.630	4.287	3.870	3.689	1.687	1.861	2.080	2.226	120-130	1.565	1700	98.8,98.8
140	9.562	9.199	8.789	8.582	5.432	5.842	6.259	6.396	130-140	3.925	1704	99,99
150	12.64	12.46	12.31	12.12	10.30	10.56	10.94	11.09	140-150	6.048	1710	99.4,99.4
160	13.34	13.31	13.45	13.34	12.65	12.53	12.71	12.75	150-160	5.772	1715	99.7,99.7
170	11.65	11.83	12.11	12.00	11.52	11.12	11.24	11.25	160-170	3.578	1719	99.9,99.9
180	9.990	10.10	9.995	10.05	9.994	10.10	9.986	10.03	170-180	1.030	1720	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1511	1125
80	1751	1378
75	2024	1606
70	2325	1854
65	2194	1774
60	2207	1718
55	2095	1735
50	2094	1820
45	2683	2623

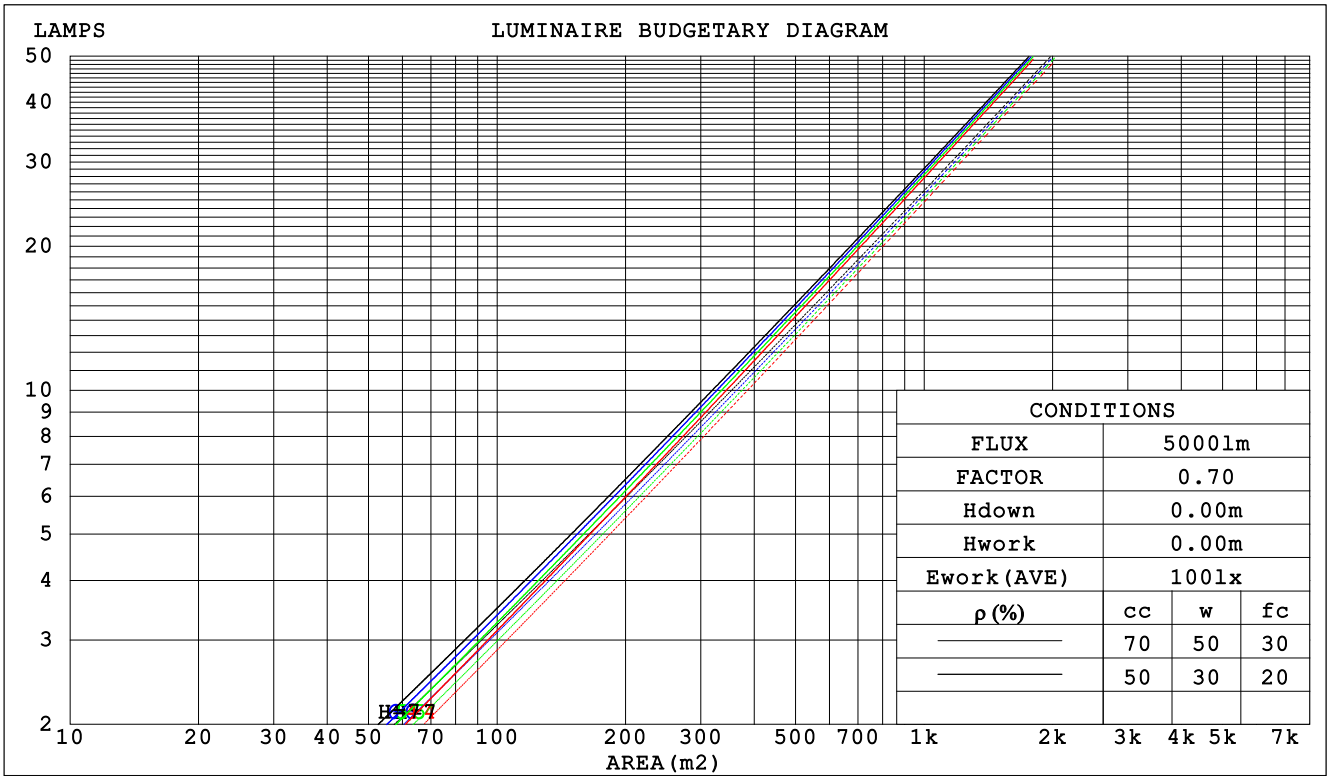
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

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, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	1.00	.98	.98	.97	.95
2.0	1.07	1.04	1.01	1.05	1.02	1.00	1.02	.00	.98	.99	.97	.96	.96	.95	.93	.92
3.0	1.02	.99	.96	1.01	.98	.95	.98	.95	.93	.96	.94	.92	.93	.92	.90	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.90	.88	.91	.89	.87	.86
5.0	.94	.90	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.87	.84	.90	.86	.84	.89	.85	.83	.88	.85	.82	.86	.84	.82	.81
7.0	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.84	.81	.79	.78
8.0	.85	.81	.78	.85	.81	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.76
9.0	.83	.79	.76	.82	.78	.76	.81	.78	.75	.81	.77	.75	.80	.77	.75	.74
10.0	.80	.76	.74	.80	.76	.74	.79	.76	.73	.79	.75	.73	.78	.75	.73	.72



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:

C:\Users\Administrator\Desktop\KAI\CP3R-TW-16W-DT1-9030-B15-HA-RW.GOS

WEC AND CCEC

NAME: MCR-3 (16W, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coeffcients(WEC)									
0.0																
1.0	.140	.080	.025	.133	.076	.024	.120	.069	.022	.108	.062	.020	.096	.056	.018	
2.0	.130	.071	.022	.124	.068	.021	.113	.063	.020	.103	.058	.018	.094	.053	.017	
3.0	.121	.064	.019	.116	.062	.019	.107	.058	.018	.098	.054	.017	.090	.050	.015	
4.0	.113	.059	.017	.109	.057	.017	.101	.054	.016	.094	.051	.015	.087	.047	.014	
5.0	.107	.054	.016	.103	.053	.015	.096	.050	.015	.090	.048	.014	.084	.045	.014	
6.0	.101	.051	.014	.098	.049	.014	.092	.047	.014	.087	.045	.013	.082	.043	.013	
7.0	.096	.047	.013	.093	.046	.013	.088	.045	.013	.083	.043	.012	.079	.041	.012	
8.0	.091	.045	.013	.089	.044	.012	.084	.042	.012	.080	.041	.012	.076	.039	.011	
9.0	.087	.042	.012	.085	.041	.012	.081	.040	.011	.077	.039	.011	.074	.037	.011	
10.0	.084	.040	.011	.082	.039	.011	.078	.038	.011	.075	.037	.011	.071	.036	.010	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.106	.125	.107	.092	.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	.123	.096	.076	.106	.083	.066	.073	.058	.047	.042	.034	.028	.014	.011	.009	
6.0	.114	.086	.066	.098	.075	.057	.068	.052	.040	.039	.031	.024	.013	.010	.008	
7.0	.107	.078	.058	.092	.068	.050	.064	.047	.036	.037	.028	.021	.012	.009	.007	
8.0	.100	.071	.051	.086	.062	.045	.060	.043	.032	.035	.026	.019	.011	.008	.006	
9.0	.095	.066	.046	.082	.057	.040	.057	.040	.028	.033	.024	.017	.011	.008	.006	
10.0	.090	.061	.041	.077	.053	.036	.054	.037	.026	.031	.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, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	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	10.0	10.7	10.3	10.9	11.0	11.1	11.7	11.3	11.9	12.1
	3H	10.1	10.8	10.4	11.0	11.2	11.1	11.7	11.3	11.9	12.1
	4H	10.2	10.8	10.5	11.0	11.3	11.1	11.7	11.3	11.9	12.1
	6H	10.2	10.8	10.5	11.0	11.3	11.0	11.6	11.3	11.8	12.1
	8H	10.2	10.8	10.5	11.0	11.3	11.0	11.6	11.3	11.8	12.1
	12H	10.2	10.7	10.5	11.0	11.3	11.0	11.5	11.3	11.8	12.1
4H	2H	9.9	10.5	10.2	10.7	10.9	10.9	11.5	11.2	11.7	12.0
	3H	10.1	10.6	10.4	10.9	11.2	11.0	11.5	11.3	11.8	12.0
	4H	10.2	10.7	10.6	11.0	11.3	11.0	11.5	11.3	11.8	12.1
	6H	10.3	10.7	10.7	11.1	11.4	11.0	11.4	11.4	11.8	12.1
	8H	10.3	10.7	10.7	11.1	11.4	11.0	11.4	11.4	11.7	12.1
	12H	10.3	10.7	10.7	11.0	11.5	10.9	11.3	11.4	11.7	12.1
8H	4H	10.2	10.5	10.6	10.9	11.3	10.9	11.3	11.3	11.7	12.1
	6H	10.3	10.6	10.7	11.0	11.5	10.9	11.3	11.4	11.7	12.1
	8H	10.3	10.6	10.8	11.0	11.5	10.9	11.2	11.4	11.7	12.1
	12H	10.3	10.6	10.8	11.1	11.5	10.9	11.2	11.4	11.6	12.1
12H	4H	10.1	10.5	10.5	10.9	11.3	10.9	11.2	11.3	11.6	12.0
	6H	10.2	10.5	10.7	11.0	11.4	10.9	11.2	11.4	11.6	12.1
	8H	10.3	10.5	10.8	11.0	11.5	10.9	11.2	11.4	11.6	12.1

Variations with the observer position at spacings:		
S = 1.0H	+ 2.2 / - 1.0	+ 4.1 / - 2.2
1.5H	+ 4.1 / - 1.0	+ 6.5 / - 2.2
2.0H	+ 0.3 / - 0.3	+ 0.3 / - 0.4

CIE Pub.117 Corrected 1720 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.9)

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:

UTILIZATION FACTORS TABLE

NAME: MCR-3 (16W, 15°)	**TYPE:LED**	**WEIGHT:**
SPEC.:15.7W	**DIM.:**	**SERIAL No.:1**
MFR.: Utopia Lighting	**SUR.:**	**PROTECTION ANGLE:**

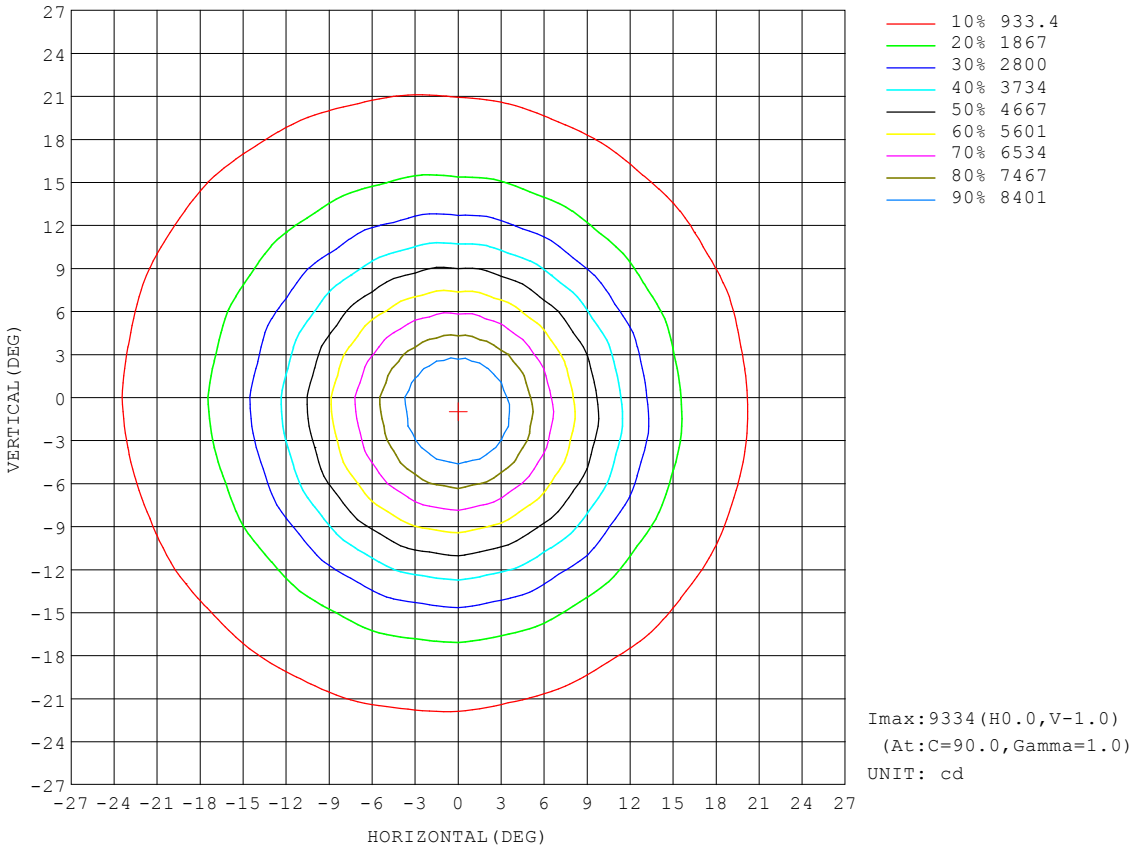
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	84	81	90	84	81	89	84	81	77
0.80	97	92	89	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	98	95	92	88
1.25	104	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	111	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, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



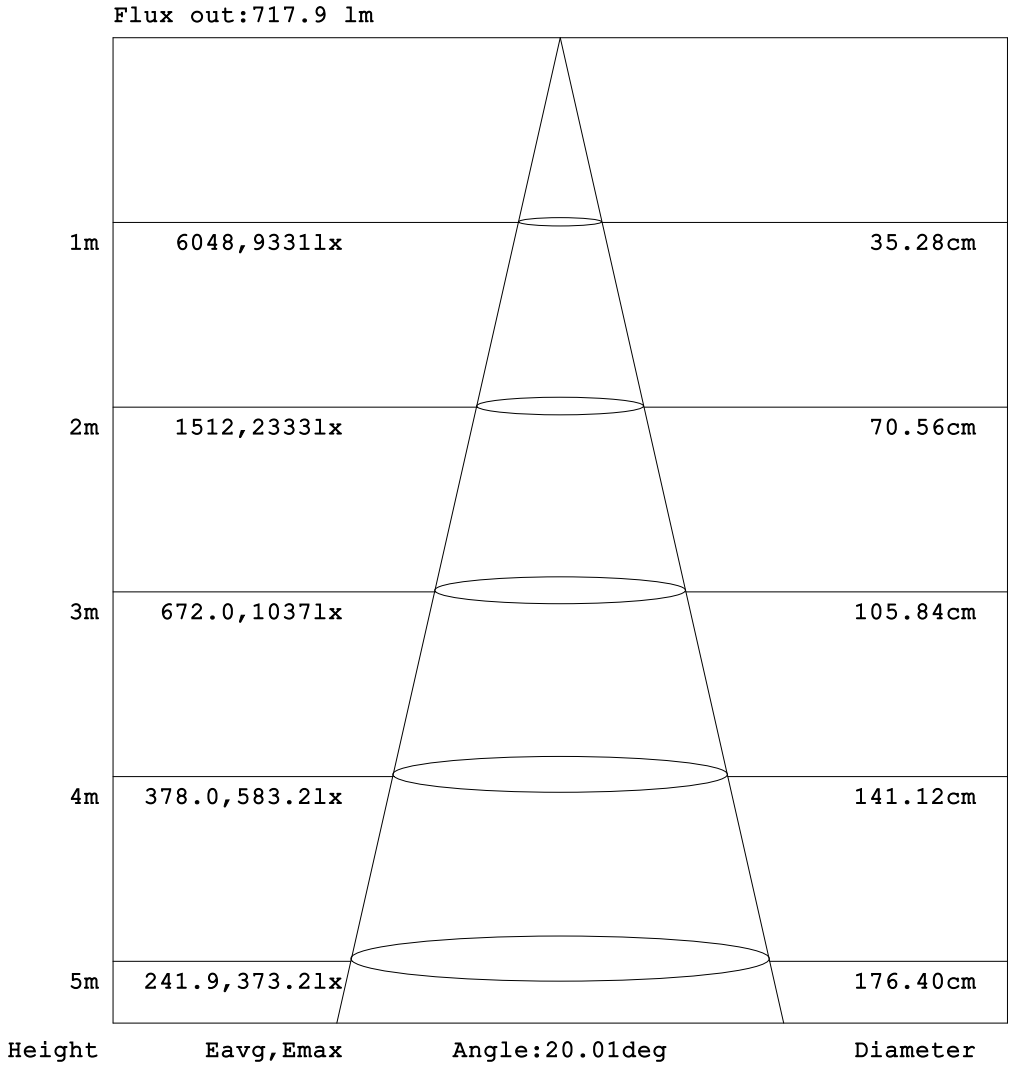
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-11-25

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:

C:\Users\Administrator\Desktop\KAI\CP3R-TW-16W-DT1-9030-B15-HA-RW.GOS

AAI Figure

NAME: MCR-3 (16W, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



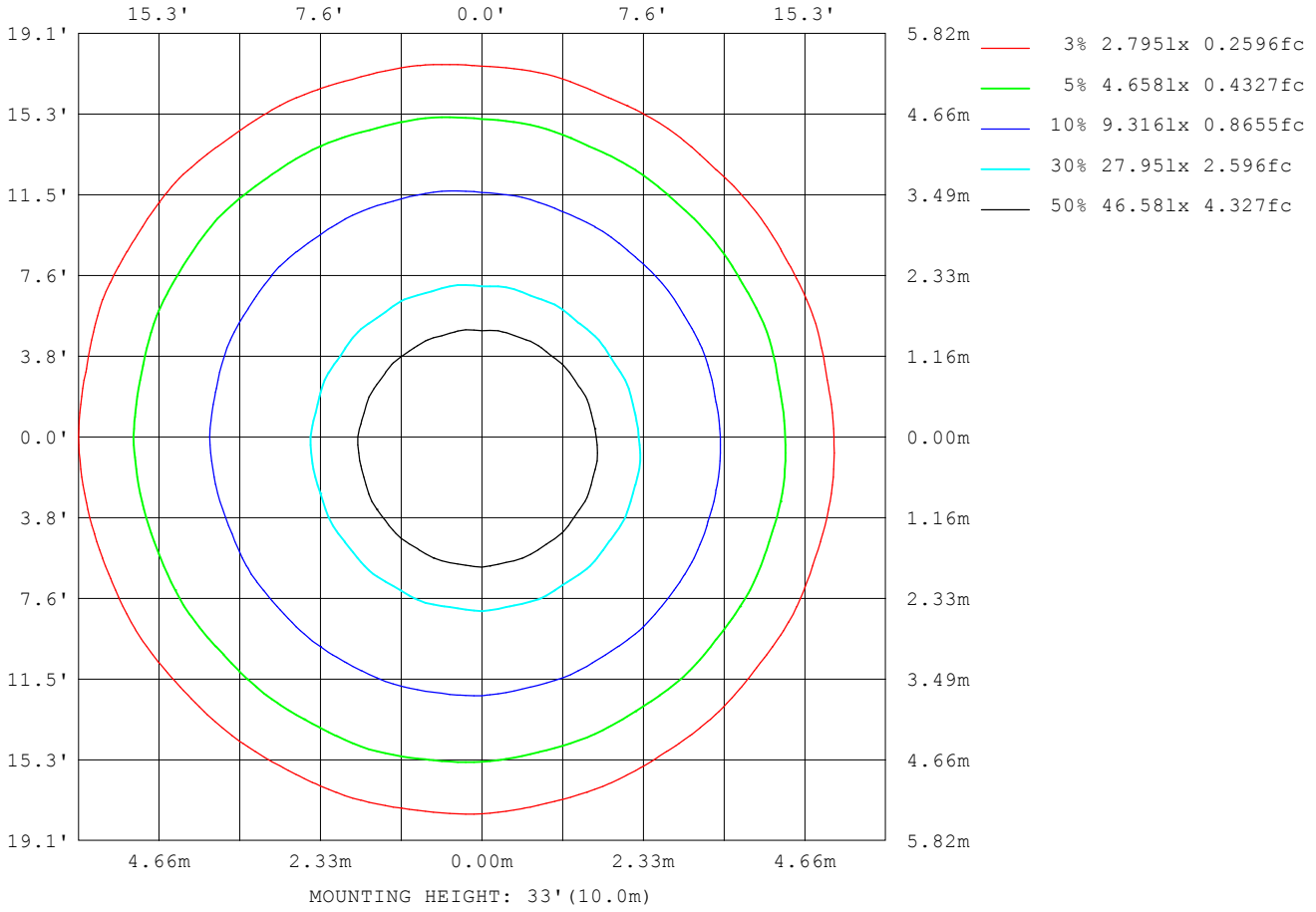
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	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:

C:\Users\Administrator\Desktop\KAI\CP3R-TW-16W-DT1-9030-B15-HA-RW.GOS

LED Avg.L Report

NAME: MCR-3 (16W, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

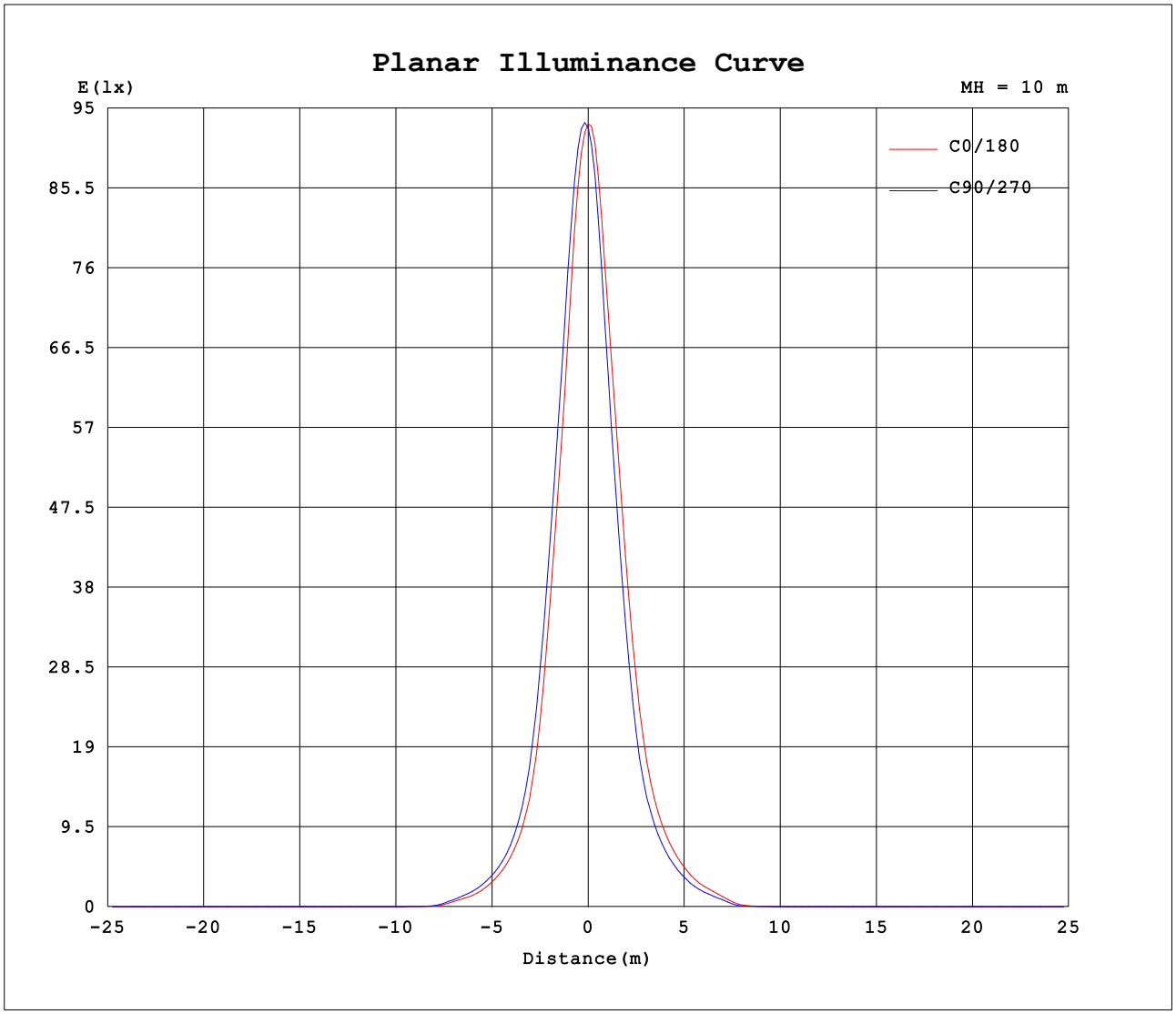
AvgL	cd/m2
L_0~180(65)av	1795
L_0~180(75)av	1642
L_0~180(85)av	1215
L_90~270(65)av	1737
L_90~270(75)av	1565
L_90~270(85)av	1140
L_45(65)av	1761
L_45(75)av	1601
L_45(85)av	1152

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:

C:\Users\Administrator\Desktop\KAI\CP3R-TW-16W-DT1-9030-B15-HA-RW.GOS

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MCR-3 (16W, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--1 UNIT: cd

γ (DEG) \ C(DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278
5	7470	7653	7692	7886	7900	8084	8084	8197	8166	8239	8163	8211	8087	8096	7937	7925	7771	7758	7689
10	4472	4627	4662	4831	4853	5018	5017	5163	5166	5280	5230	5312	5229	5274	5152	5159	5019	4999	4951
15	2029	2123	2144	2262	2285	2427	2420	2553	2558	2641	2612	2702	2637	2703	2624	2666	2583	2610	2596
20	951	970	984	1019	1030	1081	1089	1140	1153	1206	1220	1259	1266	1296	1298	1326	1322	1342	1347
25	508	521	522	541	541	565	571	593	608	636	650	684	687	713	720	752	756	778	783
30	253	263	262	274	277	291	297	315	320	341	344	365	370	388	395	415	420	433	440
35	114	120	118	126	122	134	134	146	146	158	159	169	173	183	191	203	206	217	222
40	14.7	15.1	14.9	15.3	15.3	15.9	15.8	16.6	16.5	17.4	16.8	17.8	17.0	18.1	18.2	19.6	20.1	22.3	24.0
45	8.50	8.52	8.41	8.46	8.24	8.33	8.25	8.38	8.20	8.36	8.36	8.99	8.95	9.39	9.45	10.1	10.1	10.6	11.0
50	6.03	6.01	5.97	5.90	5.81	5.77	5.66	5.55	5.40	5.27	5.09	5.03	4.82	4.73	4.57	4.51	4.45	4.43	4.47
55	5.39	5.33	5.35	5.22	5.15	5.04	4.95	4.76	4.70	4.48	4.40	4.25	4.15	4.00	3.97	3.83	3.83	3.75	3.77
60	4.95	4.96	4.94	4.75	4.57	4.44	4.41	4.25	4.18	3.87	3.72	3.55	3.52	3.41	3.38	3.19	3.16	3.12	3.16
65	4.16	4.12	4.14	4.05	4.03	3.89	3.83	3.68	3.57	3.38	3.28	3.11	3.04	2.89	2.85	2.74	2.74	2.68	2.67
70	3.56	3.55	3.56	3.50	3.45	3.35	3.27	3.12	3.01	2.86	2.77	2.61	2.55	2.43	2.38	2.30	2.29	2.23	2.24
75	2.35	2.34	2.34	2.29	2.26	2.18	2.13	2.03	1.98	1.87	1.82	1.72	1.68	1.59	1.59	1.51	1.52	1.46	1.48
80	1.36	1.34	1.36	1.32	1.32	1.27	1.24	1.17	1.16	1.08	1.06	0.99	0.99	0.93	0.93	0.87	0.89	0.86	0.85
85	0.59	0.56	0.58	0.55	0.56	0.52	0.53	0.48	0.49	0.44	0.46	0.41	0.43	0.37	0.40	0.35	0.39	0.35	0.36
90	0.03	0.01	0.03	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.03	0.01	0.03	0.01	0.03	0.00	0.03	0.01	0.03
95	0.02	0.03	0.01	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.04
100	0.04	0.07	0.08	0.06	0.04	0.05	0.03	0.05	0.02	0.05	0.02	0.05	0.02	0.05	0.03	0.05	0.02	0.05	0.05
105	0.14	0.18	0.14	0.18	0.14	0.17	0.14	0.15	0.12	0.14	0.12	0.13	0.09	0.12	0.08	0.12	0.08	0.12	0.07
110	0.40	0.41	0.38	0.40	0.36	0.38	0.35	0.34	0.30	0.32	0.27	0.29	0.27	0.28	0.23	0.26	0.23	0.26	0.13
115	0.78	0.81	0.77	0.78	0.74	0.74	0.71	0.69	0.64	0.63	0.59	0.59	0.55	0.55	0.51	0.53	0.51	0.54	0.25
120	1.49	1.48	1.46	1.44	1.41	1.37	1.31	1.28	1.22	1.19	1.13	1.11	1.07	1.06	1.02	1.04	1.01	1.03	0.47
125	2.70	2.64	2.63	2.56	2.52	2.44	2.39	2.30	2.25	2.18	2.15	2.07	2.04	2.00	2.01	1.99	2.02	2.01	0.88
130	4.63	4.52	4.50	4.37	4.37	4.21	4.17	4.03	4.00	3.87	3.85	3.74	3.74	3.67	3.71	3.66	3.73	3.71	1.69
135	7.11	6.97	6.96	6.80	6.78	6.61	6.58	6.41	6.39	6.25	6.22	6.12	6.12	6.03	6.09	6.03	6.12	6.10	3.18
140	9.56	9.46	9.43	9.30	9.27	9.13	9.09	8.95	8.92	8.79	8.76	8.65	8.64	8.57	8.59	8.54	8.60	8.58	5.43
145	11.4	11.4	11.3	11.3	11.2	11.1	11.1	11.0	11.0	10.9	10.8	10.8	10.7	10.7	10.7	10.6	10.7	10.6	8.02
150	12.6	12.6	12.6	12.5	12.5	12.5	12.4	12.4	12.3	12.3	12.2	12.2	12.2	12.1	12.1	12.1	12.1	12.1	10.3
155	13.3	13.3	13.2	13.2	13.1	13.2	13.1	13.2	13.1	13.2	13.1	13.1	13.0	13.0	13.0	13.0	13.0	13.0	11.9
160	13.3	13.4	13.4	13.3	13.3	13.3	13.3	13.4	13.4	13.5	13.4	13.4	13.3	13.3	13.3	13.4	13.4	13.4	12.6
165	12.9	12.9	12.9	12.8	12.9	12.9	13.0	13.0	13.1	13.1	13.1	13.0	13.1	13.0	13.1	13.1	13.1	13.1	12.5
170	11.6	11.7	11.7	11.8	11.8	11.8	11.9	12.0	12.1	12.1	12.1	12.1	12.0	12.0	12.0	12.0	12.0	11.9	11.5
175	10.2	10.3	10.4	10.4	10.6	10.7	10.8	10.8	10.8	10.8	10.8	10.8	10.7	10.7	10.7	10.6	10.5	10.3	10.2
180	9.99	9.99	9.98	10.0	10.1	10.1	10.0	10.0	10.0	9.99	9.96	9.96	9.99	10.1	10.0	9.96	9.90	9.89	9.99

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, 15°)	TYPE:LED	WEIGHT:
SPEC.:15.7W	DIM.:	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--2 UNIT: cd

γ (DEG) \ C(DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350
0	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278	9278
5	7520	7509	7360	7366	7220	7217	7092	7132	7033	7095	7030	7122	7099	7240	7235	7394	7399
10	4768	4746	4563	4556	4374	4356	4210	4222	4100	4146	4076	4162	4114	4221	4214	4376	4392
15	2486	2479	2364	2341	2216	2191	2078	2069	1966	1974	1903	1932	1887	1936	1916	1997	1983
20	1323	1312	1279	1252	1191	1164	1111	1084	1035	1014	976	966	940	948	931	951	936
25	767	773	752	743	703	683	642	627	592	579	548	539	520	515	508	513	501
30	431	440	425	422	394	381	355	344	322	314	292	289	273	270	259	260	252
35	222	225	215	212	195	189	171	164	152	144	127	128	116	119	115	118	114
40	23.6	23.9	21.9	21.7	19.8	18.8	17.2	16.6	15.6	15.3	14.4	14.4	14.0	14.3	14.1	14.5	14.3
45	10.7	10.7	10.2	10.4	9.74	9.69	8.96	8.78	8.35	8.32	8.15	8.22	8.07	8.13	8.08	8.30	8.32
50	4.44	4.44	4.43	4.45	4.52	4.60	4.67	4.81	4.93	5.13	5.35	5.48	5.58	5.66	5.75	5.85	5.96
55	3.82	3.79	3.83	3.82	3.93	3.97	4.12	4.18	4.33	4.41	4.60	4.70	4.88	4.98	5.11	5.15	5.31
60	3.20	3.13	3.13	3.11	3.26	3.35	3.54	3.60	3.70	3.78	4.02	4.24	4.40	4.43	4.46	4.47	4.67
65	2.71	2.68	2.76	2.74	2.85	2.88	3.02	3.10	3.23	3.31	3.47	3.55	3.73	3.81	3.96	4.02	4.12
70	2.27	2.23	2.29	2.29	2.38	2.42	2.52	2.58	2.70	2.78	2.92	3.01	3.15	3.23	3.37	3.43	3.53
75	1.49	1.47	1.51	1.51	1.57	1.57	1.65	1.67	1.77	1.81	1.92	1.97	2.07	2.15	2.21	2.26	2.32
80	0.88	0.85	0.89	0.86	0.92	0.94	0.98	0.97	1.04	1.08	1.13	1.14	1.22	1.24	1.31	1.30	1.37
85	0.39	0.34	0.39	0.34	0.39	0.36	0.41	0.39	0.45	0.43	0.48	0.47	0.53	0.50	0.57	0.55	0.60
90	0.04	0.02	0.04	0.02	0.04	0.02	0.04	0.02	0.04	0.02	0.04	0.02	0.04	0.02	0.03	0.02	0.04
95	0.04	0.04	0.03	0.04	0.04	0.04	0.03	0.04	0.03	0.04	0.03	0.04	0.03	0.02	0.03	0.04	0.03
100	0.04	0.05	0.05	0.05	0.04	0.05	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.05	0.03	0.05	0.03
105	0.04	0.07	0.09	0.07	0.05	0.07	0.05	0.08	0.07	0.06	0.07	0.07	0.05	0.07	0.08	0.07	0.06
110	0.09	0.13	0.11	0.13	0.11	0.13	0.10	0.14	0.12	0.14	0.13	0.15	0.14	0.15	0.13	0.16	0.13
115	0.21	0.25	0.23	0.25	0.23	0.26	0.24	0.28	0.29	0.29	0.27	0.32	0.28	0.33	0.30	0.34	0.32
120	0.44	0.48	0.45	0.49	0.51	0.52	0.50	0.55	0.55	0.58	0.57	0.61	0.61	0.65	0.64	0.67	0.66
125	0.87	0.91	0.92	0.94	0.95	1.00	1.01	1.05	1.06	1.11	1.13	1.16	1.18	1.22	1.22	1.25	1.24
130	1.72	1.74	1.79	1.84	1.89	1.92	1.99	2.02	2.08	2.10	2.15	2.17	2.23	2.23	2.26	2.25	2.27
135	3.28	3.30	3.41	3.43	3.57	3.59	3.71	3.72	3.83	3.83	3.93	3.91	4.00	3.96	4.03	3.96	3.99
140	5.57	5.58	5.73	5.76	5.93	5.95	6.12	6.12	6.26	6.23	6.37	6.32	6.43	6.36	6.44	6.33	6.37
145	8.14	8.15	8.30	8.32	8.49	8.51	8.68	8.70	8.86	8.83	8.97	8.93	9.03	8.95	9.03	8.93	8.97
150	10.4	10.4	10.5	10.5	10.6	10.7	10.8	10.8	10.9	10.9	11.0	11.0	11.1	11.1	11.1	11.1	11.1
155	11.9	11.9	11.9	11.9	12.0	12.0	12.1	12.2	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.4	12.4
160	12.6	12.6	12.5	12.5	12.5	12.5	12.6	12.6	12.7	12.7	12.7	12.7	12.7	12.7	12.8	12.8	12.9
165	12.5	12.4	12.3	12.2	12.2	12.2	12.3	12.3	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.5	12.5
170	11.4	11.3	11.3	11.2	11.1	11.0	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.3	11.3	11.3	11.4
175	10.2	10.1	10.2	10.1	10.1	10.0	10.1	10.1	10.1	10.1	10.2	10.1	10.2	10.1	10.1	10.0	10.0
180	9.95	9.98	10.0	10.1	10.1	10.0	9.97	9.99	9.99	9.96	9.93	9.97	10.0	10.0	9.92	9.89	9.85

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: