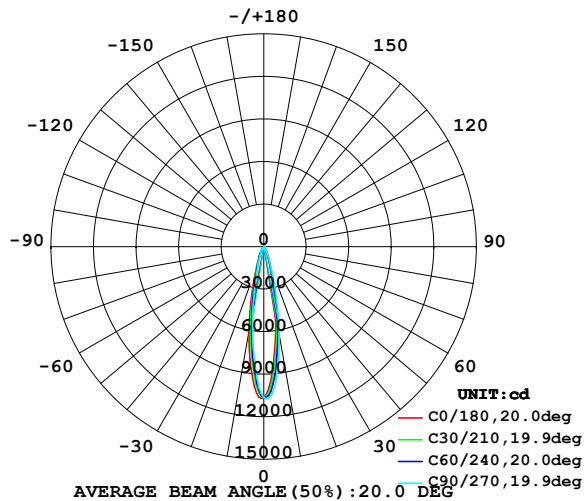


LUMINAIRE PHOTOMETRIC TEST REPORT

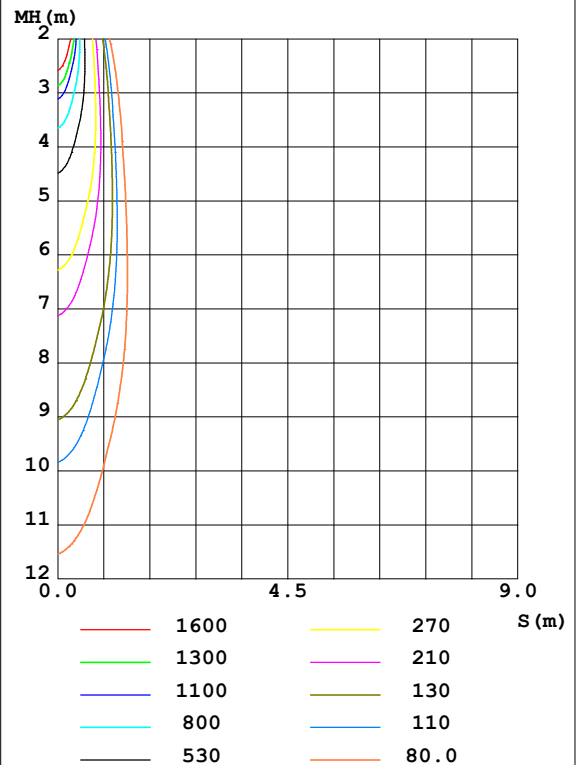
NAME: MCR-3 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 102.71 lm/W			
MCR-3 (19W, 15°)		Imax(cd)	10781	S/MH(C0/180)	0.38
NOMINAL POWER(W)	19	LOR(%)	100.0	S/MH(C90/270)	0.30
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1929.7	η UP,DN(C0-180)	0.7,53.4
NOMINAL FLUX(lm)	1929.71	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,45.3
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)



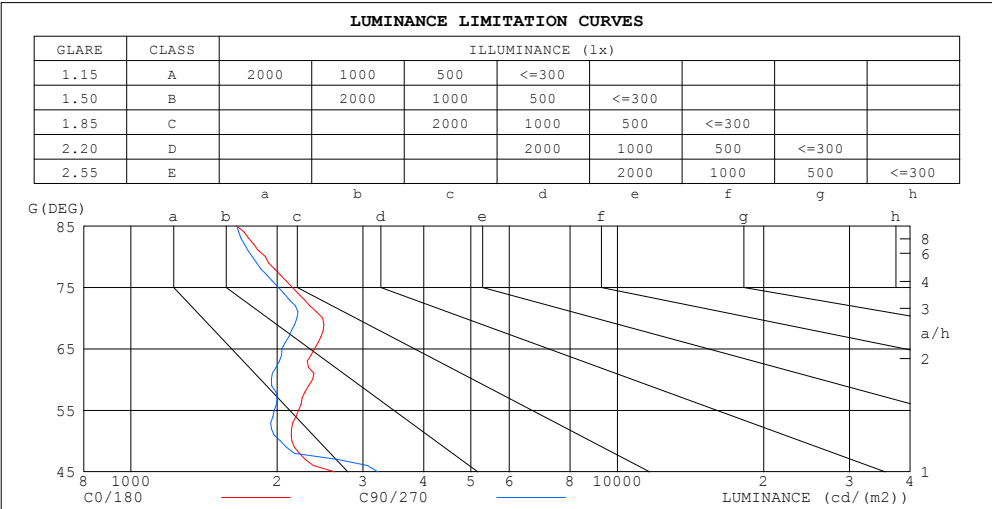
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2025-08-19

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	471.7	546.9	625.2	645.3	605.1	516.9	446.2	435.0	0- 10	720.6	720.6	37.3,37.3
20	107.4	121.8	143.7	153.9	148.8	124.2	104.8	102.0	10- 20	744.9	1465	75.9,75.9
30	29.94	32.67	39.65	46.36	46.43	36.63	29.87	28.65	20- 30	320.6	1786	92.6,92.6
40	1.377	1.586	2.125	2.882	2.337	1.569	1.324	1.339	30- 40	98.98	1885	97.7,97.7
50	0.6189	0.6106	0.5872	0.5603	0.5557	0.5582	0.5801	0.6050	40- 50	7.582	1893	98.1,98.1
60	0.5313	0.4800	0.4381	0.4220	0.4168	0.4218	0.4409	0.4906	50- 60	4.615	1897	98.3,98.3
70	0.3807	0.3703	0.3383	0.3215	0.3145	0.3083	0.3179	0.3494	60- 70	3.965	1901	98.5,98.5
80	0.1474	0.1475	0.1388	0.1319	0.1268	0.1200	0.1183	0.1292	70- 80	2.410	1904	98.6,98.6
90	0.0068	0.0070	0.0081	0.0097	0.0058	0.0068	0.0059	0.0050	80- 90	0.6779	1904	98.7,98.7
100	0.0081	0.0063	0.0059	0.0050	0.0068	0.0074	0.0068	0.0075	90-100	0.0583	1904	98.7,98.7
110	0.0418	0.0340	0.0303	0.0269	0.0153	0.0153	0.0158	0.0203	100-110	0.1362	1905	98.7,98.7
120	0.1636	0.1378	0.1179	0.1089	0.0528	0.0570	0.0667	0.0755	110-120	0.5241	1905	98.7,98.7
130	0.5329	0.4671	0.4075	0.3896	0.1872	0.2129	0.2497	0.2653	120-130	1.715	1907	98.8,98.8
140	1.091	1.029	0.9648	0.9406	0.5986	0.6633	0.7376	0.7553	130-140	4.405	1911	99,99
150	1.427	1.400	1.375	1.355	1.159	1.207	1.261	1.271	140-150	6.841	1918	99.4,99.4
160	1.517	1.505	1.510	1.499	1.437	1.430	1.431	1.433	150-160	6.529	1925	99.7,99.7
170	1.296	1.328	1.366	1.360	1.323	1.274	1.253	1.236	160-170	4.037	1929	99.9,99.9
180	1.123	1.132	1.117	1.122	1.125	1.131	1.113	1.121	170-180	1.155	1930	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1649	1653
80	1890	1776
75	2148	2008
70	2478	2197
65	2389	2046
60	2366	1946
55	2214	1973
50	2143	2029
45	2625	3221

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:DAMIN

Test Date:2025-08-19

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291

Humidity:65.0%

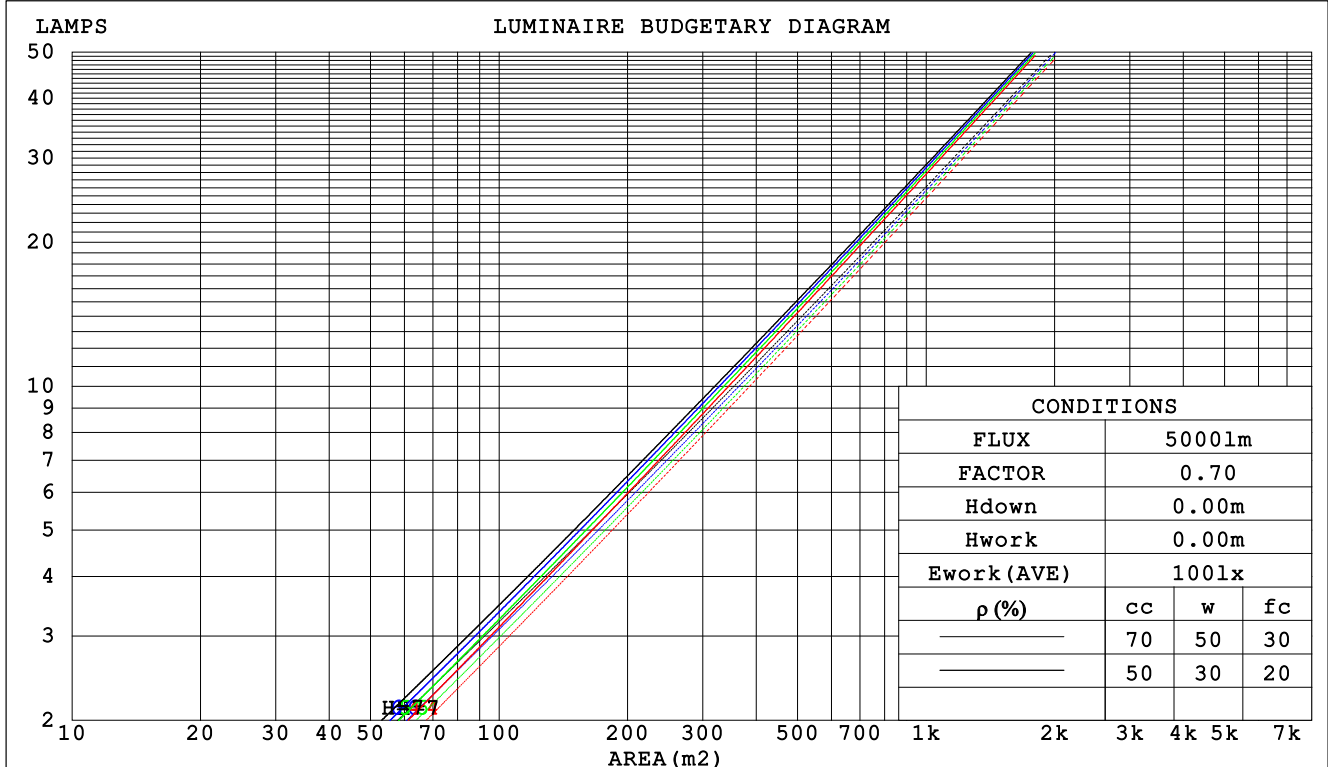
Test Distance:8.050m [K=1.0000]

Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MCR-3 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	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	1.11	1.09	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.95
2.0	1.07	1.04	1.02	1.05	1.03	1.00	1.02	.00	.98	.99	.97	.96	.96	.95	.94	.92
3.0	1.02	.99	.96	1.01	.98	.95	.98	.96	.93	.96	.94	.92	.94	.92	.90	.89
4.0	.98	.94	.91	.97	.94	.91	.95	.92	.90	.93	.91	.88	.91	.89	.87	.86
5.0	.95	.91	.87	.94	.90	.87	.92	.89	.86	.90	.88	.85	.89	.86	.85	.83
6.0	.91	.87	.84	.91	.87	.84	.89	.86	.83	.88	.85	.83	.87	.84	.82	.81
7.0	.88	.84	.81	.88	.84	.81	.87	.83	.81	.85	.82	.80	.84	.82	.80	.79
8.0	.86	.82	.79	.85	.81	.78	.84	.81	.78	.83	.80	.78	.82	.79	.77	.76
9.0	.83	.79	.76	.83	.79	.76	.82	.78	.76	.81	.78	.76	.80	.77	.75	.74
10.0	.81	.77	.74	.80	.77	.74	.80	.76	.74	.79	.76	.74	.78	.75	.73	.72



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	.139	.079	.025	.132	.075	.024	.119	.068	.022	.107	.062	.020	.096	.055	.018		
2.0	.129	.071	.022	.123	.068	.021	.112	.062	.019	.102	.057	.018	.093	.052	.017		
3.0	.120	.064	.019	.115	.062	.019	.106	.057	.017	.097	.053	.016	.090	.050	.015		
4.0	.112	.058	.017	.108	.057	.017	.100	.053	.016	.093	.050	.015	.086	.047	.014		
5.0	.106	.054	.016	.102	.053	.015	.096	.050	.015	.089	.047	.014	.084	.045	.013		
6.0	.100	.050	.014	.097	.049	.014	.091	.047	.014	.086	.045	.013	.081	.042	.013		
7.0	.095	.047	.013	.092	.046	.013	.087	.044	.013	.082	.042	.012	.078	.040	.012		
8.0	.090	.044	.012	.088	.043	.012	.084	.042	.012	.079	.040	.012	.075	.039	.011		
9.0	.086	.042	.012	.084	.041	.012	.080	.040	.011	.077	.038	.011	.073	.037	.011		
10.0	.083	.040	.011	.081	.039	.011	.077	.038	.011	.074	.037	.010	.071	.036	.010		

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	.201	.201	.201	.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	.111	.094	.085	.077	.054	.049	.045	.017	.016	.015	
3.0	.146	.124	.106	.125	.107	.092	.086	.074	.064	.050	.043	.038	.016	.014	.012	
4.0	.133	.108	.089	.114	.094	.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	.074	.057	.068	.052	.041	.039	.031	.024	.013	.010	.008	
7.0	.107	.078	.058	.092	.067	.050	.063	.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	.094	.065	.046	.081	.057	.040	.056	.040	.028	.033	.024	.017	.011	.008	.006	
10.0	.090	.061	.042	.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:2025-08-19

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 (19W, 15°)					TYPE:LED					WEIGHT:				
SPEC.:					DIM.: 3inch					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					10.5	11.1	10.7	11.3	11.5	11.7	12.4	12.0	12.6	12.7
3H					10.6	11.2	10.8	11.4	11.6	11.7	12.3	12.0	12.5	12.7
4H					10.6	11.2	10.9	11.4	11.7	11.7	12.3	12.0	12.5	12.8
6H					10.6	11.2	10.9	11.4	11.7	11.7	12.2	12.0	12.5	12.8
8H					10.6	11.2	11.0	11.4	11.7	11.7	12.2	12.0	12.5	12.8
12H					10.6	11.1	11.0	11.4	11.7	11.7	12.2	12.0	12.5	12.7
4H 2H					10.4	10.9	10.6	11.2	11.4	11.6	12.1	11.8	12.4	12.6
3H					10.5	11.0	10.8	11.3	11.6	11.6	12.1	11.9	12.4	12.7
4H					10.6	11.1	11.0	11.4	11.7	11.6	12.1	12.0	12.4	12.7
6H					10.7	11.1	11.1	11.4	11.8	11.6	12.1	12.0	12.4	12.8
8H					10.7	11.1	11.1	11.4	11.8	11.6	12.0	12.0	12.4	12.8
12H					10.7	11.0	11.1	11.4	11.8	11.6	12.0	12.0	12.4	12.8
8H 4H					10.6	10.9	11.0	11.3	11.7	11.5	11.9	12.0	12.3	12.7
6H					10.7	11.0	11.1	11.4	11.8	11.6	11.9	12.0	12.3	12.8
8H					10.7	11.0	11.2	11.4	11.9	11.6	11.9	12.1	12.3	12.8
12H					10.7	11.0	11.2	11.4	11.9	11.6	11.8	12.1	12.3	12.8
12H 4H					10.5	10.9	10.9	11.3	11.7	11.5	11.9	11.9	12.2	12.7
6H					10.6	10.9	11.1	11.4	11.8	11.6	11.8	12.0	12.3	12.7
8H					10.7	10.9	11.2	11.4	11.9	11.6	11.8	12.1	12.3	12.8
Variations with the observer position at spacings:														
S = 1.0H					+ 1.1 / - 0.6					+ 4.7 / - 2.7				
1.5H					+ 2.3 / - 0.6					+ 7.2 / - 2.7				
2.0H					+ 0.1 / - 0.3					+ 0.5 / - 0.4				

CIE Pub.117 Corrected 1930 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.3)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

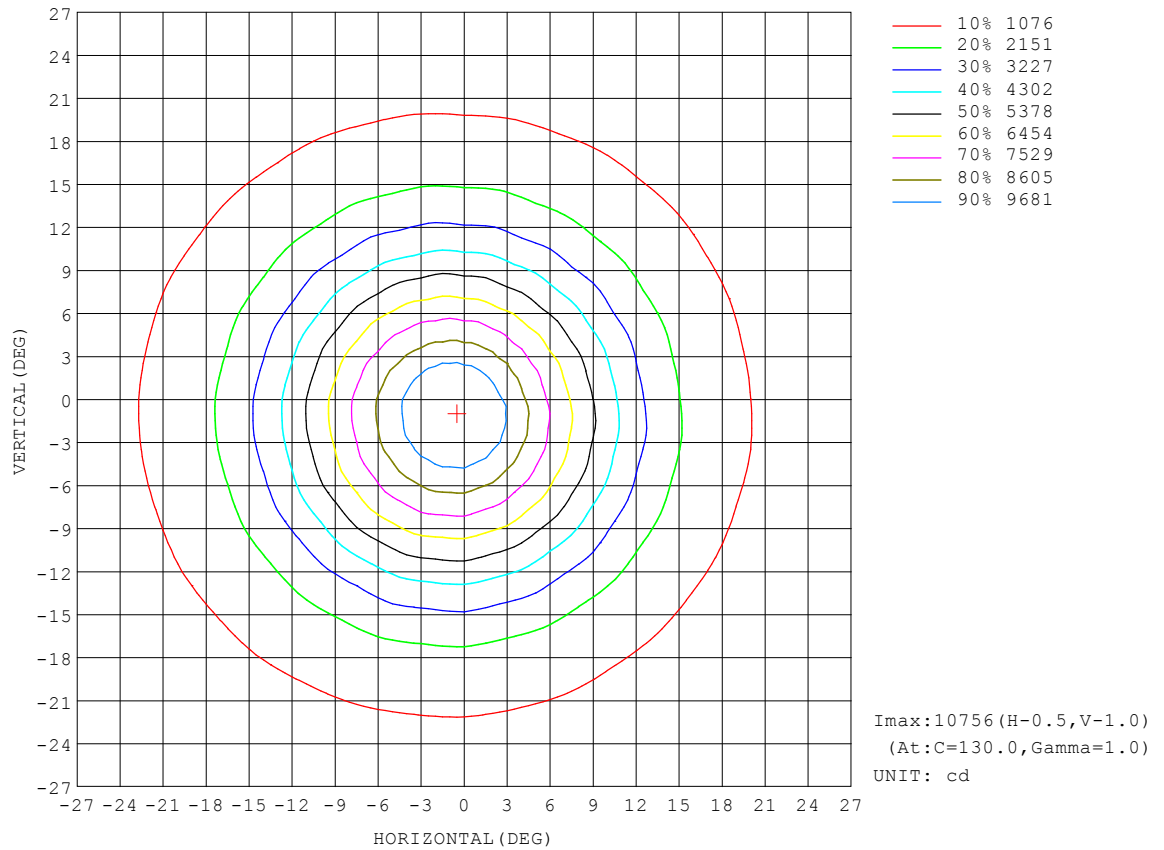
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	81	77
0.80	97	92	89	96	91	88	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	106	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: 2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

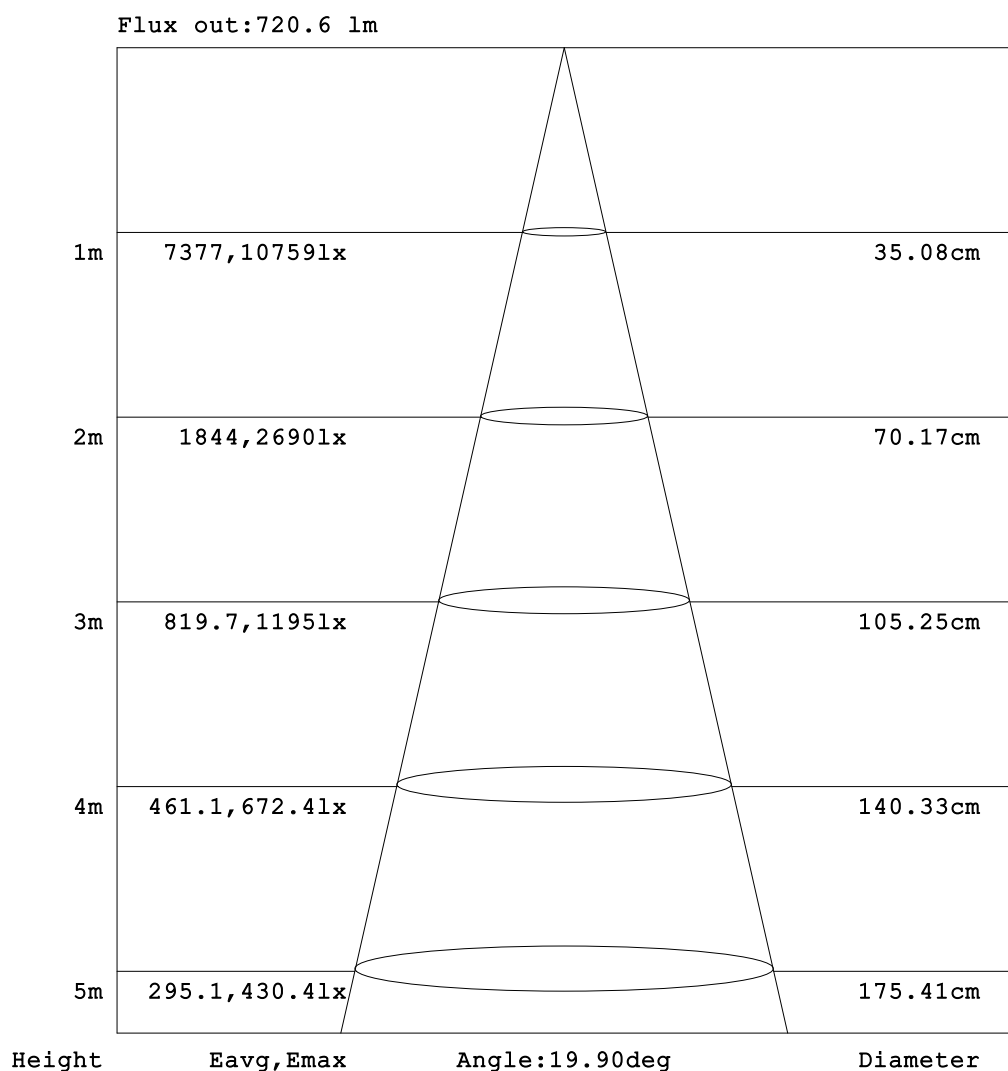


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



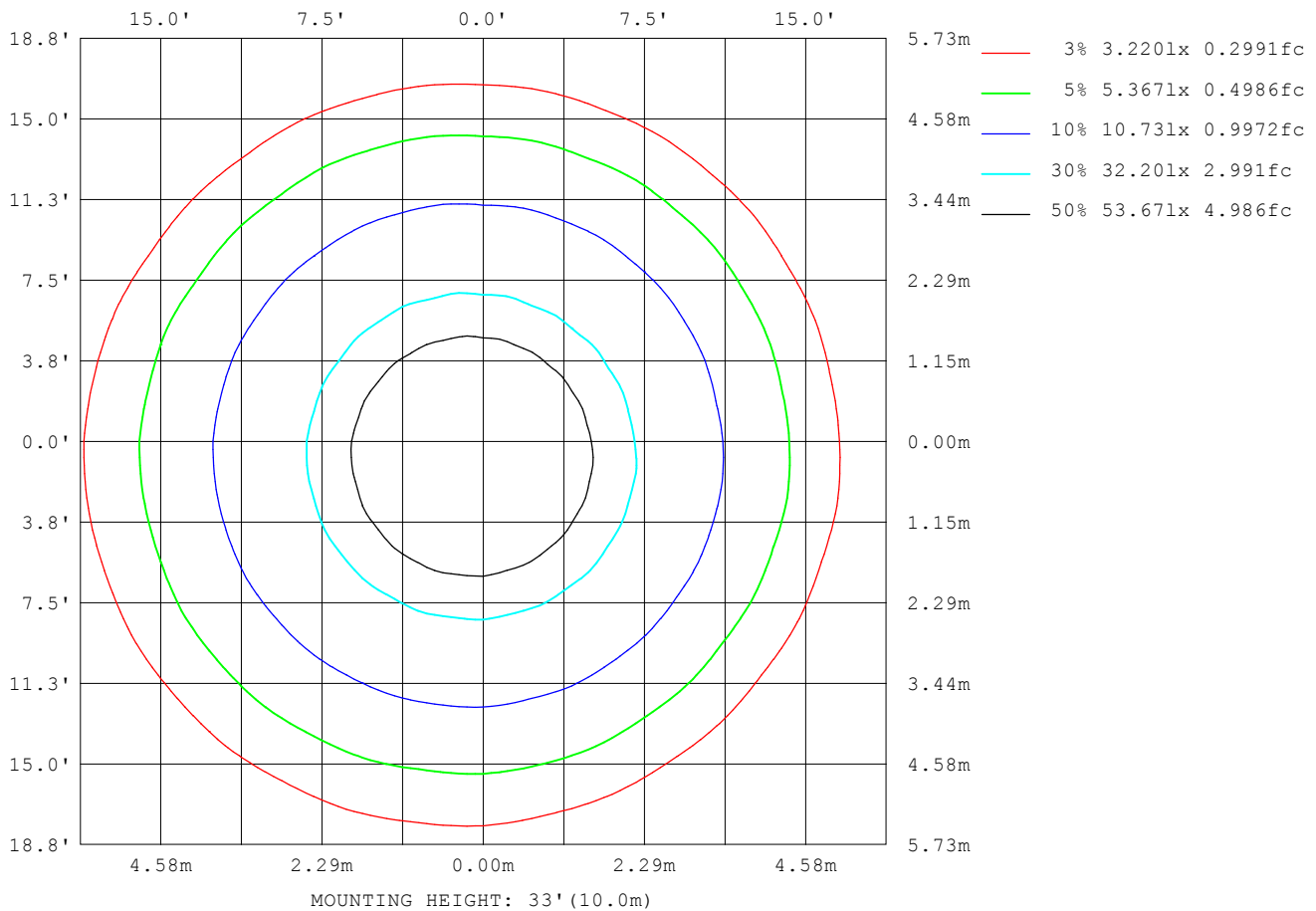
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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: 2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

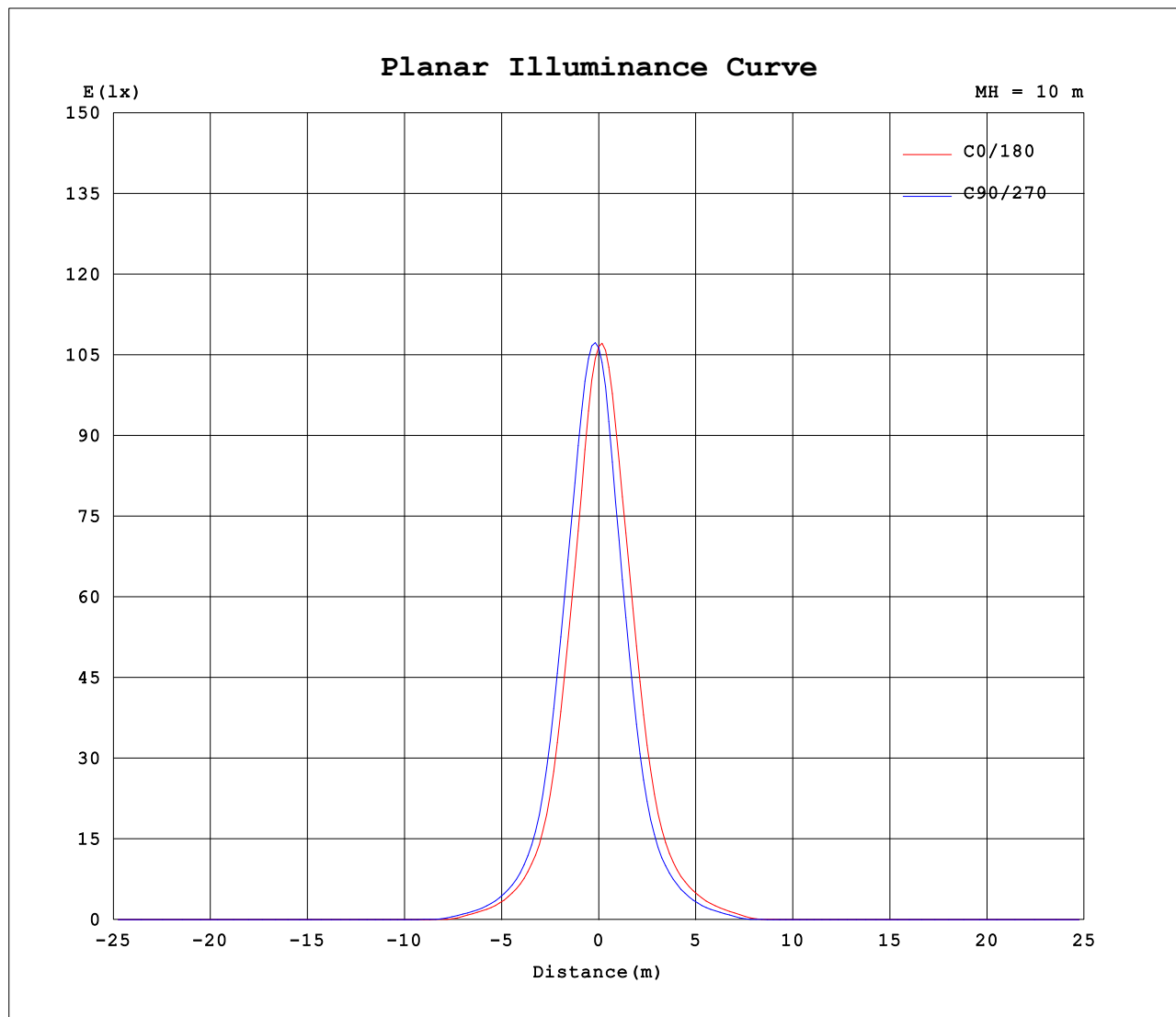
AvgL	cd/m2
L_0~180 (65) av	2159
L_0~180 (75) av	1980
L_0~180 (85) av	1574
L_90~270 (65) av	2056
L_90~270 (75) av	1889
L_90~270 (85) av	1438
L_45 (65) av	2104
L_45 (75) av	1922
L_45 (85) av	1498

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-08-19

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: 2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: ×10cd

γ (DEG) \ C (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064
5	806	830	838	863	874	900	909	934	938	958	957	969	962	971	958	961	944	941	928
10	472	492	499	523	534	560	571	596	603	625	628	647	642	651	639	641	622	618	605
15	217	228	231	244	251	268	272	294	294	314	311	329	321	331	324	329	316	318	309
20	107	111	112	116	119	124	128	135	136	144	144	151	150	155	152	156	152	152	149
25	57.6	59.6	59.3	61.3	61.5	64.7	66.0	69.8	71.8	75.1	75.9	79.4	80.4	83.8	83.8	85.5	83.7	84.2	82.7
30	29.9	30.9	30.3	31.5	31.9	33.5	34.2	36.1	37.1	39.7	40.7	43.3	44.1	46.3	46.4	47.6	46.9	47.2	46.4
35	11.0	12.0	12.0	13.7	13.7	15.4	16.0	17.0	17.5	19.1	19.9	21.5	22.5	23.8	24.1	24.6	23.9	23.9	23.1
40	1.38	1.42	1.42	1.50	1.53	1.65	1.69	1.80	1.88	2.12	2.22	2.56	2.63	2.88	2.88	3.00	2.62	2.51	2.34
45	0.83	0.86	0.86	0.89	0.91	0.93	0.93	0.96	1.00	1.03	1.06	1.09	1.11	1.18	1.16	1.16	1.14	1.11	1.08
50	0.62	0.61	0.62	0.61	0.61	0.61	0.60	0.60	0.60	0.59	0.58	0.57	0.57	0.56	0.56	0.56	0.55	0.55	0.56
55	0.57	0.56	0.56	0.55	0.55	0.54	0.54	0.53	0.52	0.51	0.51	0.50	0.49	0.48	0.48	0.48	0.48	0.48	0.49
60	0.53	0.52	0.50	0.48	0.48	0.48	0.47	0.46	0.45	0.44	0.43	0.43	0.43	0.43	0.42	0.41	0.41	0.41	0.42
65	0.45	0.45	0.45	0.44	0.44	0.43	0.42	0.41	0.40	0.39	0.39	0.38	0.38	0.37	0.37	0.37	0.37	0.36	0.37
70	0.38	0.38	0.38	0.38	0.37	0.37	0.36	0.35	0.35	0.34	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.31	0.31
75	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.21	0.21	0.21	0.21
80	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13
85	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06
90	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01
105	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
110	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
115	0.09	0.08	0.08	0.08	0.07	0.07	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.03
120	0.16	0.16	0.15	0.15	0.14	0.13	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.05
125	0.31	0.29	0.29	0.27	0.27	0.25	0.25	0.24	0.23	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.10
130	0.53	0.51	0.51	0.48	0.48	0.46	0.45	0.43	0.42	0.41	0.40	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.19
135	0.82	0.80	0.79	0.76	0.76	0.73	0.72	0.70	0.69	0.67	0.67	0.65	0.66	0.65	0.65	0.65	0.66	0.66	0.35
140	1.09	1.07	1.07	1.05	1.04	1.02	1.01	0.99	0.98	0.96	0.96	0.95	0.95	0.94	0.94	0.94	0.95	0.95	0.60
145	1.30	1.28	1.28	1.26	1.26	1.25	1.24	1.23	1.22	1.21	1.20	1.19	1.19	1.18	1.19	1.18	1.19	1.19	0.89
150	1.43	1.42	1.42	1.41	1.40	1.40	1.39	1.38	1.38	1.38	1.37	1.36	1.36	1.36	1.35	1.35	1.36	1.36	1.16
155	1.51	1.50	1.49	1.49	1.48	1.48	1.48	1.48	1.47	1.47	1.46	1.47	1.46	1.46	1.45	1.46	1.46	1.47	1.35
160	1.52	1.51	1.51	1.50	1.50	1.51	1.51	1.51	1.51	1.51	1.51	1.50	1.50	1.50	1.50	1.50	1.50	1.51	1.44
165	1.45	1.45	1.45	1.45	1.45	1.46	1.47	1.47	1.47	1.48	1.48	1.47	1.47	1.47	1.47	1.48	1.48	1.48	1.43
170	1.30	1.30	1.31	1.32	1.32	1.33	1.34	1.35	1.36	1.37	1.37	1.37	1.36	1.36	1.36	1.37	1.36	1.36	1.32
175	1.14	1.14	1.16	1.16	1.18	1.19	1.20	1.21	1.21	1.21	1.21	1.22	1.21	1.21	1.21	1.20	1.19	1.17	1.17
180	1.12	1.12	1.12	1.12	1.13	1.13	1.13	1.12	1.12	1.12	1.11	1.11	1.11	1.12	1.12	1.11	1.09	1.09	1.13

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-08-19

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 (19W, 15°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: ×10cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064	1064		
5	904	896	870	861	837	830	808	803	785	788	774	778	769	779	775	791	794		
10	578	568	539	530	503	493	469	464	446	447	432	437	429	441	440	455	458		
15	287	281	263	258	240	235	220	217	207	208	200	203	198	204	202	210	210		
20	141	139	132	127	121	117	112	109	105	105	102	103	101	103	102	104	104		
25	78.9	77.1	71.8	69.8	65.5	64.4	60.8	59.5	56.8	56.7	54.9	55.5	54.3	55.1	54.2	55.7	55.6		
30	44.0	42.4	39.1	37.9	35.4	34.4	32.3	31.6	29.9	30.1	29.0	29.3	28.4	28.9	28.5	29.4	29.3		
35	21.3	20.0	18.2	17.0	15.2	14.5	12.4	12.2	11.1	11.0	9.97	10.4	9.73	9.90	9.54	10.3	10.4		
40	2.00	1.88	1.70	1.62	1.52	1.48	1.39	1.36	1.32	1.31	1.30	1.33	1.33	1.35	1.35	1.34	1.35		
45	1.05	1.02	0.97	0.93	1.32	1.93	0.97	0.82	0.80	0.80	0.78	0.78	0.84	0.80	0.80	0.82	0.82		
50	0.55	0.55	0.54	0.54	0.58	0.63	0.59	0.57	0.58	0.58	0.58	0.59	0.60	0.61	0.61	0.61	0.62		
55	0.49	0.48	0.49	0.49	0.50	0.52	0.51	0.50	0.51	0.51	0.53	0.54	0.55	0.55	0.56	0.56	0.57		
60	0.42	0.41	0.42	0.41	0.43	0.43	0.44	0.43	0.44	0.45	0.47	0.48	0.49	0.49	0.50	0.50	0.54		
65	0.37	0.37	0.37	0.37	0.37	0.37	0.38	0.38	0.39	0.40	0.41	0.41	0.43	0.43	0.44	0.44	0.45		
70	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.33	0.34	0.34	0.35	0.36	0.37	0.38		
75	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.22	0.22	0.23	0.24	0.24	0.25		
80	0.13	0.12	0.12	0.12	0.12	0.11	0.12	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.14	0.14	0.15		
85	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06		
90	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01		
95	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01		
100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
105	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
110	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
115	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
120	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.07		
125	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14		
130	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.25	0.26	0.26	0.27	0.26	0.27	0.26	0.26		
135	0.36	0.37	0.38	0.39	0.41	0.41	0.43	0.44	0.46	0.46	0.47	0.47	0.48	0.47	0.47	0.46	0.46		
140	0.62	0.62	0.64	0.65	0.68	0.68	0.71	0.71	0.74	0.74	0.76	0.75	0.76	0.75	0.76	0.74	0.74		
145	0.91	0.92	0.94	0.95	0.97	0.98	1.01	1.01	1.03	1.03	1.05	1.04	1.05	1.04	1.05	1.03	1.03		
150	1.17	1.18	1.19	1.20	1.22	1.22	1.24	1.24	1.26	1.26	1.27	1.27	1.27	1.27	1.27	1.26	1.26		
155	1.35	1.35	1.36	1.36	1.37	1.38	1.39	1.39	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40		
160	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.44	1.43	1.44	1.44	1.43	1.44	1.43	1.44	1.44	1.45		
165	1.42	1.41	1.41	1.40	1.40	1.39	1.39	1.38	1.39	1.38	1.38	1.38	1.38	1.38	1.38	1.39	1.39		
170	1.31	1.30	1.29	1.28	1.27	1.25	1.25	1.25	1.25	1.25	1.24	1.23	1.24	1.24	1.24	1.24	1.25		
175	1.16	1.16	1.16	1.15	1.15	1.13	1.13	1.12	1.12	1.11	1.12	1.11	1.12	1.10	1.10	1.09	1.10		
180	1.12	1.12	1.12	1.13	1.13	1.13	1.12	1.12	1.11	1.11	1.11	1.11	1.12	1.12	1.11	1.09	1.09		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-08-19

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: