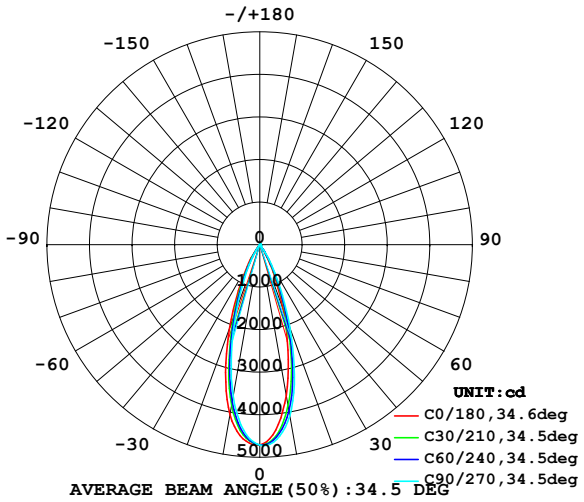
LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

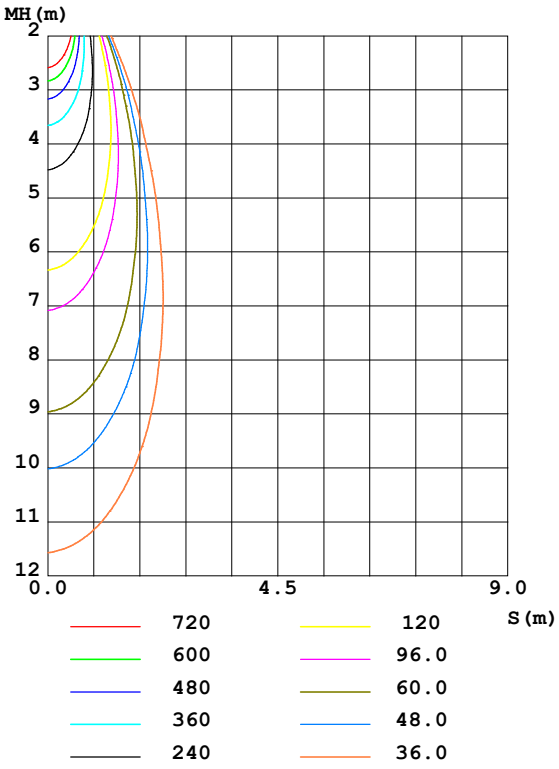
DATA OF LAMP		PHOTOMETRIC DATA Eff: 96.08 lm/W			
MCR-3 (19W, 36°)		Imax(cd)	4726	S/MH(C0/180)	0.60
NOMINAL POWER(W)	19	LOR(%)	100.0	S/MH(C90/270)	0.53
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1809.1	η UP,DN(C0-180)	0.7,52.4
NOMINAL FLUX(lm)	1809.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,46.3
LAMPS INSIDE	1	η up(%)	1.3	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	120	η down(%)	98.7	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):34.5 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:2025-08-19

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:

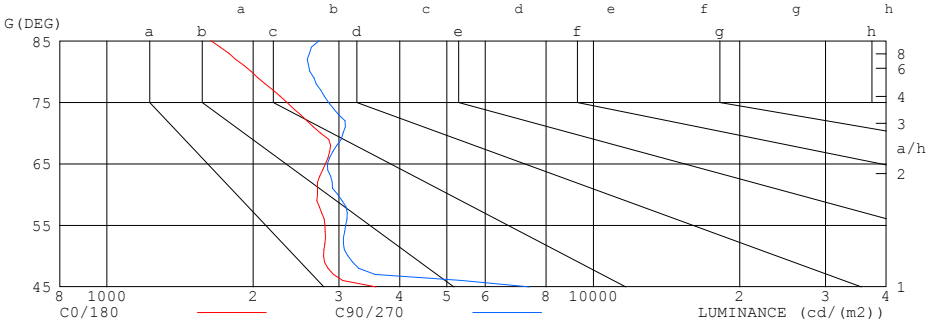
ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3595	3908	4082	4076	4056	3787	3617	3585	0- 10	407.4	407.4	22.5,22.5
20	1587	1863	2067	2106	2070	1750	1560	1556	10- 20	774.9	1182	65.4,65.4
30	353.8	470.9	561.4	588.3	597.8	452.9	348.7	319.4	20- 30	466.9	1649	91.2,91.2
40	26.15	33.17	41.54	50.65	47.64	35.46	27.33	25.12	30- 40	107.3	1757	97.1,97.1
50	7.895	8.743	9.090	8.243	7.956	7.443	7.351	7.570	40- 50	13.78	1770	97.9,97.9
60	5.966	6.681	6.739	6.147	5.847	5.207	5.325	5.660	50- 60	6.348	1777	98.2,98.2
70	4.137	4.787	4.733	4.427	4.039	3.471	3.382	3.703	60- 70	4.975	1782	98.5,98.5
80	1.515	1.914	2.051	1.871	1.608	1.241	1.193	1.307	70- 80	2.910	1785	98.6,98.6
90	0.0971	0.1263	0.2345	0.2182	0.1358	0.0450	0.0589	0.0524	80- 90	0.8250	1785	98.7,98.7
100	0.0661	0.0719	0.0860	0.0500	0.0749	0.0810	0.0634	0.0727	90-100	0.0660	1785	98.7,98.7
110	0.5419	0.4114	0.3585	0.3065	0.1458	0.1688	0.1855	0.2043	100-110	0.1509	1786	98.7,98.7
120	2.124	1.760	1.569	1.507	0.6628	0.8119	0.9231	0.9583	110-120	0.6732	1786	98.7,98.7
130	5.342	4.735	4.362	4.286	2.381	2.816	3.119	3.134	120-130	2.104	1788	98.9,98.9
140	9.396	8.753	8.345	8.255	5.784	6.409	6.838	6.844	130-140	4.289	1793	99.1,99.1
150	12.63	12.23	12.00	11.87	9.829	10.35	10.71	10.69	140-150	5.932	1799	99.4,99.4
160	13.57	13.42	13.47	13.35	12.42	12.43	12.55	12.45	150-160	5.697	1804	99.7,99.7
170	12.47	12.62	12.73	12.58	12.36	12.17	12.20	12.04	160-170	3.628	1808	99.9,99.9
180	12.20	12.31	12.21	12.21	12.27	12.30	12.17	12.21	170-180	1.164	1809	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	1638	2732
80	1983	2612
75	2346	2856
70	2748	3061
65	2816	2843
60	2711	2981
55	2807	3098
50	2790	3128
45	3579	7390

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:

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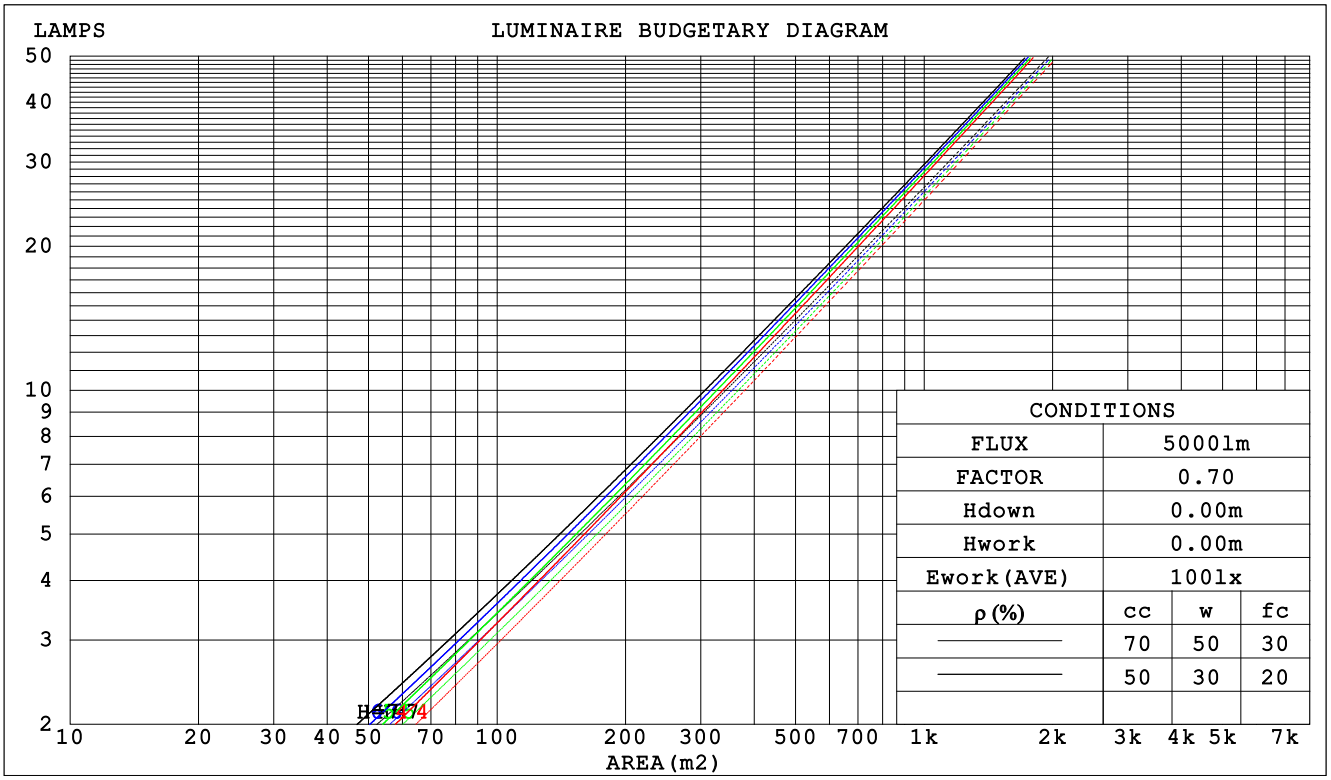
CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	1.08	1.10	1.08	1.06	1.05	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.06	1.02	.00	1.04	1.01	.98	1.01	.98	.96	.97	.95	.94	.95	.93	.92	.90
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.91	.94	.91	.89	.91	.89	.88	.86
4.0	.96	.91	.88	.94	.90	.87	.92	.89	.86	.90	.87	.85	.88	.86	.84	.82
5.0	.91	.87	.83	.90	.86	.83	.88	.85	.82	.87	.84	.81	.85	.82	.80	.79
6.0	.87	.83	.79	.86	.82	.79	.85	.81	.78	.84	.80	.78	.82	.79	.77	.76
7.0	.84	.79	.76	.83	.78	.75	.82	.78	.75	.81	.77	.74	.79	.76	.74	.73
8.0	.80	.76	.72	.80	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.70
9.0	.77	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.69	.74	.71	.68	.67
10.0	.74	.70	.67	.74	.70	.67	.73	.69	.66	.72	.69	.66	.72	.68	.66	.65



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:

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WEC AND CCEC

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	.152	.087	.027	.145	.083	.026	.132	.076	.024	.120	.069	.022	.109	.063	.020	
2.0	.142	.078	.024	.136	.075	.023	.125	.070	.022	.115	.065	.020	.106	.060	.019	
3.0	.134	.071	.021	.129	.069	.021	.119	.065	.020	.111	.061	.019	.103	.057	.018	
4.0	.126	.065	.019	.122	.064	.019	.114	.060	.018	.106	.057	.017	.099	.054	.016	
5.0	.119	.061	.018	.116	.059	.017	.109	.057	.017	.102	.054	.016	.096	.051	.015	
6.0	.113	.057	.016	.110	.056	.016	.104	.053	.016	.098	.051	.015	.093	.049	.015	
7.0	.108	.053	.015	.105	.052	.015	.100	.051	.015	.095	.049	.014	.090	.047	.014	
8.0	.103	.050	.014	.101	.050	.014	.096	.048	.014	.092	.046	.013	.087	.045	.013	
9.0	.099	.048	.013	.097	.047	.013	.093	.046	.013	.089	.044	.013	.085	.043	.012	
10.0	.095	.046	.013	.093	.045	.013	.089	.044	.012	.086	.043	.012	.082	.041	.012	

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	.157	.154	.144	.135	.105	.099	.093	.060	.057	.054	.019	.018	.018	
2.0	.162	.143	.126	.139	.123	.109	.095	.085	.076	.055	.049	.045	.018	.016	.015	
3.0	.148	.124	.104	.127	.107	.090	.087	.074	.063	.050	.043	.037	.016	.014	.012	
4.0	.137	.108	.087	.117	.094	.075	.081	.065	.053	.047	.038	.031	.015	.012	.010	
5.0	.127	.096	.074	.109	.083	.064	.075	.058	.045	.043	.034	.027	.014	.011	.009	
6.0	.119	.087	.064	.102	.075	.056	.070	.053	.039	.041	.031	.023	.013	.010	.008	
7.0	.111	.079	.056	.096	.068	.049	.066	.048	.035	.038	.028	.021	.012	.009	.007	
8.0	.105	.072	.050	.091	.063	.043	.063	.044	.031	.037	.026	.018	.012	.009	.006	
9.0	.100	.067	.044	.086	.058	.039	.060	.041	.028	.035	.024	.016	.011	.008	.005	
10.0	.095	.062	.040	.082	.054	.035	.057	.038	.025	.033	.022	.015	.011	.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, 36°)	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	10.8	11.5	11.0	11.7	11.9	13.7	14.4	13.9	14.6	14.8
	3H	10.9	11.6	11.2	11.8	12.0	13.7	14.3	13.9	14.6	14.8
	4H	11.0	11.6	11.3	11.9	12.1	13.7	14.3	14.0	14.6	14.8
	6H	11.0	11.6	11.3	11.9	12.2	13.7	14.3	14.0	14.5	14.8
	8H	11.0	11.6	11.3	11.9	12.2	13.7	14.3	14.0	14.5	14.8
	12H	11.0	11.6	11.3	11.9	12.1	13.6	14.2	14.0	14.5	14.8
4H	2H	10.7	11.3	11.0	11.6	11.8	13.5	14.1	13.8	14.4	14.6
	3H	11.0	11.5	11.3	11.8	12.1	13.5	14.1	13.9	14.4	14.7
	4H	11.1	11.6	11.5	11.9	12.3	13.6	14.1	13.9	14.4	14.8
	6H	11.2	11.6	11.6	12.0	12.4	13.6	14.1	14.0	14.4	14.8
	8H	11.2	11.6	11.6	12.0	12.4	13.6	14.1	14.0	14.4	14.8
	12H	11.2	11.6	11.6	12.0	12.4	13.6	14.0	14.1	14.4	14.8
8H	4H	11.1	11.5	11.5	11.9	12.3	13.5	13.9	13.9	14.3	14.7
	6H	11.3	11.6	11.7	12.0	12.5	13.6	13.9	14.0	14.4	14.8
	8H	11.3	11.6	11.8	12.1	12.5	13.6	13.9	14.1	14.4	14.8
	12H	11.3	11.6	11.8	12.1	12.6	13.6	13.9	14.1	14.4	14.9
12H	4H	11.1	11.5	11.5	11.9	12.3	13.5	13.9	13.9	14.2	14.7
	6H	11.2	11.6	11.7	12.0	12.5	13.5	13.9	14.0	14.3	14.8
	8H	11.3	11.6	11.8	12.1	12.6	13.6	13.9	14.1	14.3	14.8

Variations with the observer position at spacings:		
S = 1.0H	+ 0.7 / - 0.8	+ 3.0 / - 1.7
1.5H	+ 1.6 / - 0.9	+ 5.0 / - 1.8
2.0H	+ 0.1 / - 0.3	+ 2.1 / - 0.4

CIE Pub.117 Corrected 1809 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.1)

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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, 36°)	**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) x RCR = 5									
k = 0.60	90	84	81	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	105	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

C Range: 0 - 360DEG
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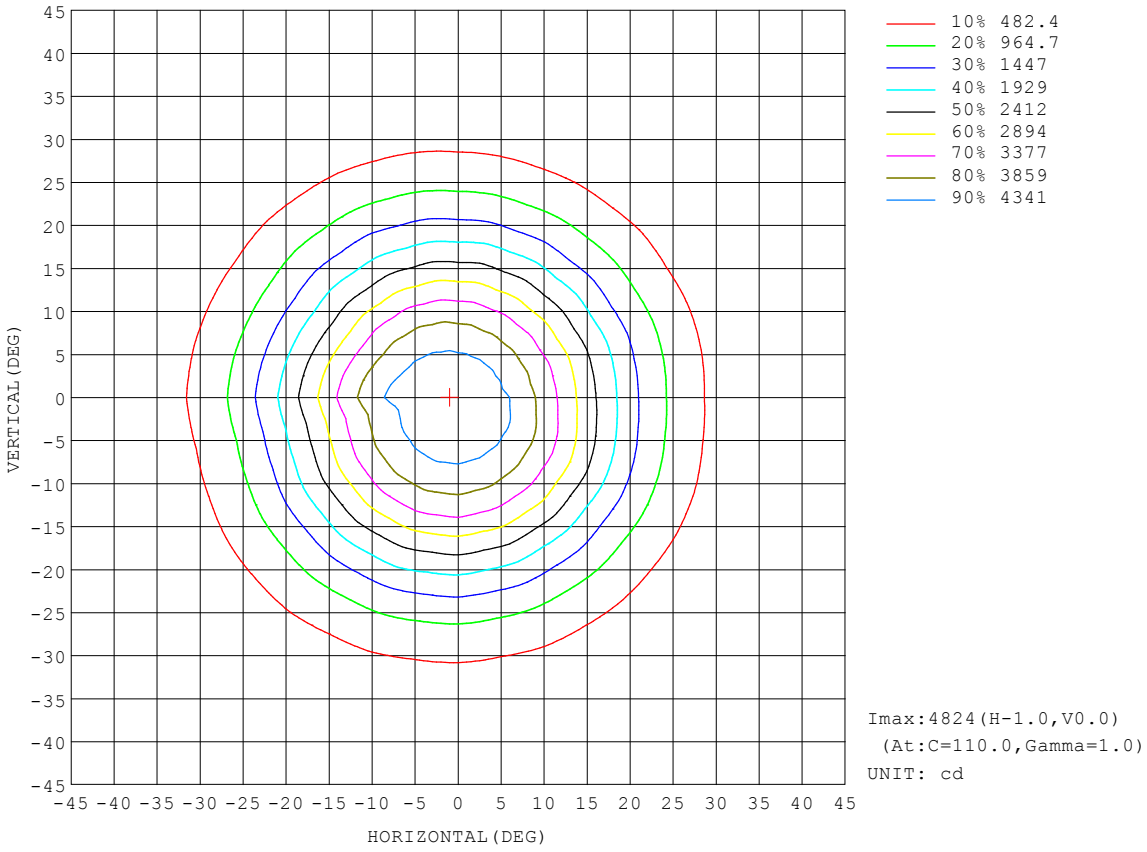
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



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Humidity:65.0%
Test Distance:8.050m [K=1.0000]
Remarks:

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AAI Figure

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
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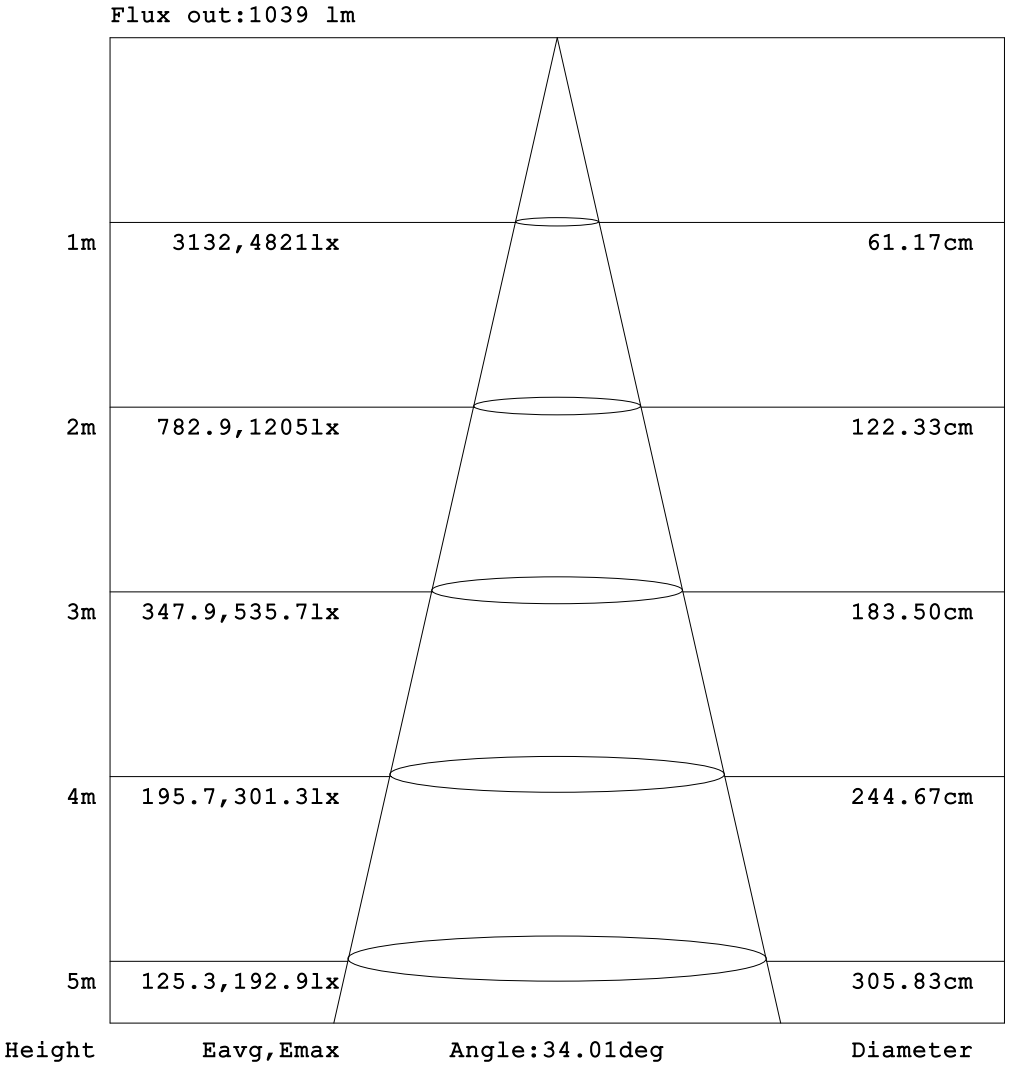
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:



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

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C Interval: 10.0DEG
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ISOLUX DIAGRAM

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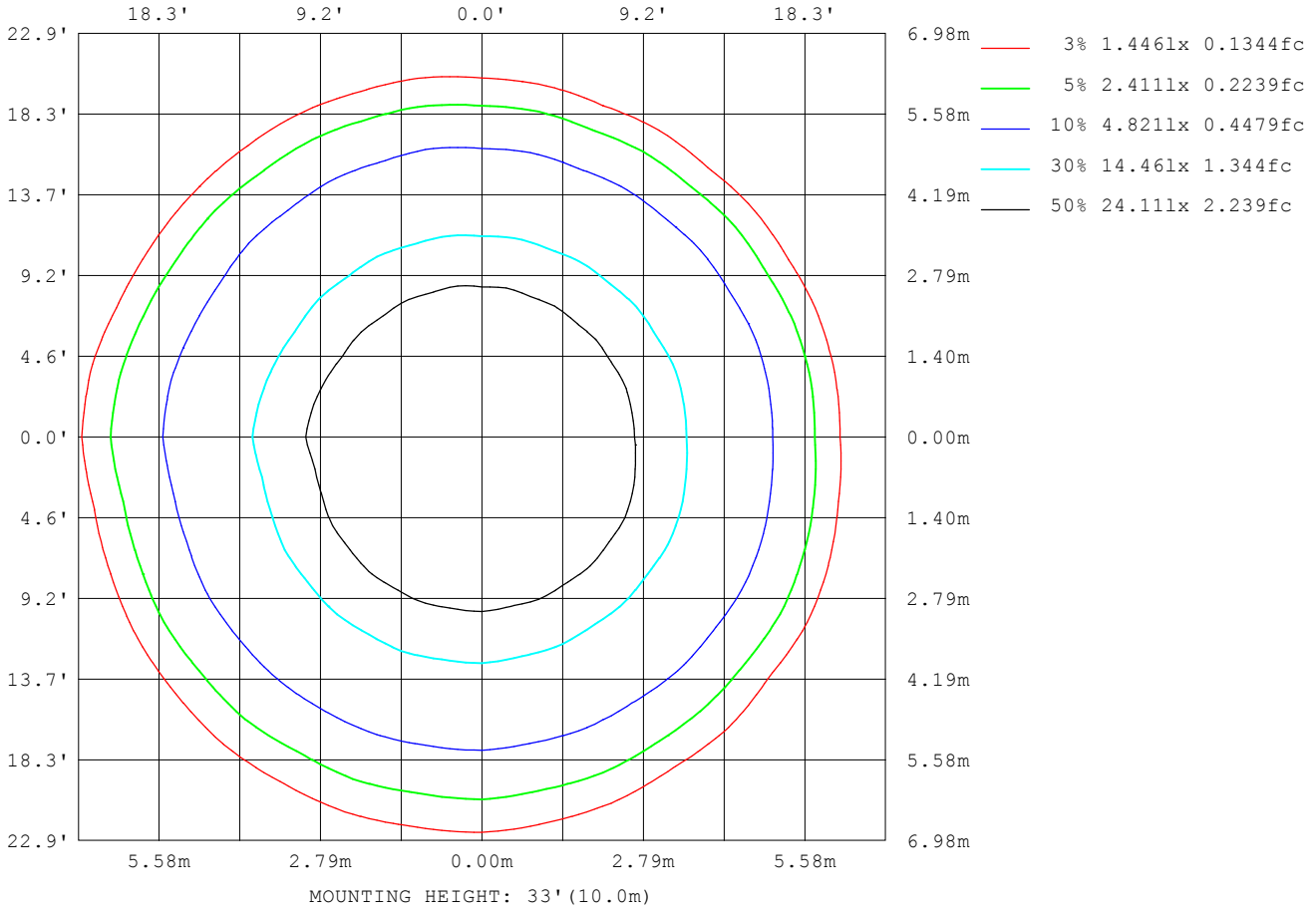

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Operators:DAMIN
Test Date:2025-08-19

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:

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LED Avg.L Report

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	SERIAL No.:1
MFR.: Utopia Lighting	SUR.:	PROTECTION ANGLE:

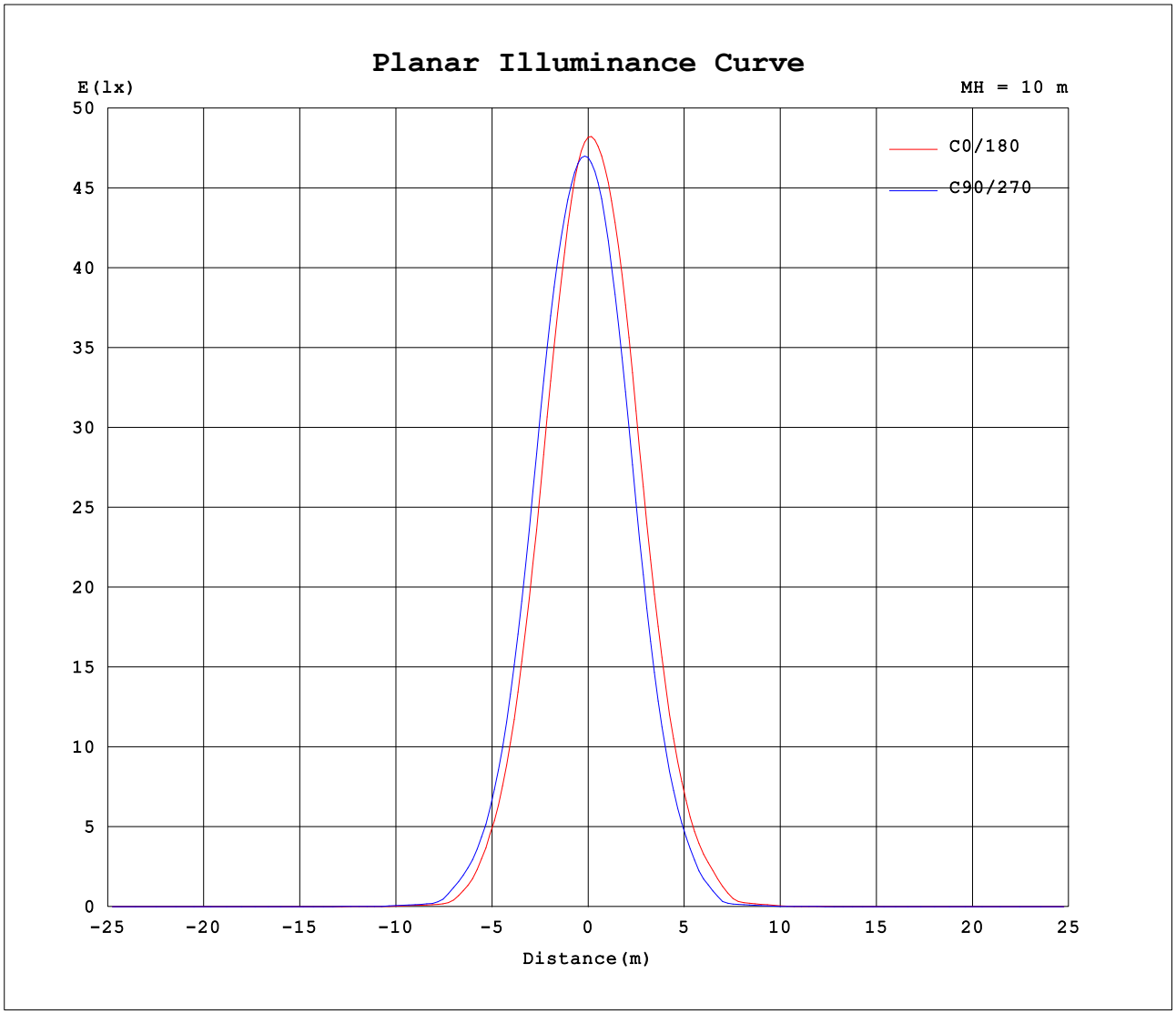
AvgL	cd/m2
L_0~180(65)av	2623
L_0~180(75)av	2305
L_0~180(85)av	1777
L_90~270(65)av	2635
L_90~270(75)av	2359
L_90~270(85)av	1917
L_45(65)av	2633
L_45(75)av	2318
L_45(85)av	1812

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:

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LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713
5	4373	4405	4462	4499	4506	4538	4541	4567	4569	4595	4590	4605	4592	4599	4580	4581	4560	4554	4579
10	3595	3652	3762	3838	3871	3944	3964	4023	4034	4082	4074	4104	4083	4094	4058	4060	4009	4001	4056
15	2562	2647	2767	2876	2894	2993	2999	3087	3091	3163	3152	3199	3168	3189	3129	3132	3057	3043	3110
20	1587	1647	1746	1820	1823	1904	1911	1992	1995	2067	2062	2119	2096	2132	2081	2092	2020	2012	2070
25	838	872	940	985	991	1041	1052	1102	1110	1159	1164	1204	1194	1218	1191	1200	1161	1150	1195
30	354	387	430	453	460	482	494	530	525	561	553	578	568	597	579	585	563	560	598
35	77.1	93.3	127	148	152	168	174	199	204	222	218	238	240	246	237	233	212	206	230
40	26.2	27.2	28.9	31.0	32.0	34.3	35.3	37.7	38.7	41.5	42.7	46.0	48.2	50.4	50.9	50.9	48.4	47.4	47.6
45	11.1	13.0	15.8	17.8	18.3	20.1	21.7	22.1	22.1	23.6	23.1	23.9	22.5	23.0	20.7	20.5	17.5	16.8	19.6
50	7.89	8.02	8.30	8.50	8.80	8.69	8.81	9.11	8.92	9.09	8.81	8.51	8.25	8.24	8.24	8.14	8.07	7.91	7.96
55	7.09	7.17	7.45	7.59	7.89	8.16	8.10	7.95	7.92	8.03	7.81	7.54	7.42	7.43	7.66	7.86	7.47	7.35	7.36
60	5.97	6.15	6.38	6.43	6.53	6.83	6.60	6.61	6.56	6.74	6.47	6.32	6.17	6.13	6.16	6.07	5.90	5.95	5.85
65	5.24	5.28	5.42	5.43	5.50	5.48	5.52	5.48	5.47	5.43	5.38	5.28	5.24	5.16	5.07	4.94	4.86	4.73	4.74
70	4.14	4.32	4.57	4.68	4.77	4.80	4.82	4.83	4.78	4.73	4.71	4.63	4.57	4.48	4.38	4.26	4.15	4.01	4.04
75	2.67	2.76	2.98	3.07	3.14	3.21	3.26	3.31	3.33	3.34	3.33	3.29	3.21	3.12	3.02	2.92	2.80	2.68	2.70
80	1.52	1.56	1.75	1.82	1.89	1.94	1.98	2.02	2.06	2.05	2.06	2.01	1.98	1.90	1.85	1.74	1.68	1.58	1.61
85	0.63	0.65	0.82	0.84	0.91	0.94	0.99	1.02	1.06	1.08	1.08	1.05	1.03	0.98	0.96	0.88	0.84	0.74	0.77
90	0.10	0.08	0.10	0.08	0.13	0.13	0.19	0.19	0.25	0.23	0.27	0.24	0.26	0.21	0.22	0.18	0.18	0.12	0.14
95	0.06	0.04	0.05	0.04	0.03	0.04	0.03	0.04	0.03	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05
100	0.07	0.08	0.08	0.08	0.08	0.06	0.04	0.09	0.07	0.09	0.07	0.06	0.04	0.06	0.04	0.06	0.05	0.05	0.07
105	0.21	0.24	0.20	0.19	0.14	0.17	0.14	0.17	0.14	0.15	0.12	0.14	0.08	0.13	0.09	0.13	0.10	0.14	0.10
110	0.54	0.54	0.50	0.46	0.41	0.41	0.36	0.38	0.36	0.36	0.32	0.33	0.29	0.32	0.29	0.34	0.31	0.36	0.15
115	1.15	1.13	1.00	0.98	0.92	0.90	0.86	0.85	0.82	0.83	0.80	0.76	0.73	0.74	0.73	0.76	0.78	0.81	0.31
120	2.12	2.08	1.91	1.85	1.79	1.73	1.68	1.64	1.59	1.57	1.53	1.52	1.50	1.50	1.51	1.54	1.56	1.59	0.66
125	3.56	3.47	3.25	3.16	3.09	3.00	2.95	2.86	2.82	2.74	2.72	2.67	2.68	2.67	2.70	2.71	2.77	2.80	1.33
130	5.34	5.23	4.98	4.87	4.80	4.67	4.63	4.49	4.46	4.36	4.35	4.27	4.30	4.26	4.31	4.30	4.40	4.42	2.38
135	7.35	7.24	6.96	6.82	6.76	6.62	6.57	6.43	6.41	6.29	6.28	6.20	6.21	6.16	6.22	6.22	6.31	6.33	3.89
140	9.40	9.30	9.02	8.89	8.82	8.69	8.63	8.51	8.46	8.35	8.34	8.26	8.28	8.24	8.27	8.27	8.37	8.39	5.78
145	11.2	11.2	10.9	10.8	10.7	10.6	10.6	10.5	10.4	10.3	10.3	10.2	10.3	10.2	10.3	10.3	10.3	10.4	7.84
150	12.6	12.6	12.4	12.3	12.3	12.2	12.2	12.1	12.1	12.0	12.0	11.9	11.9	11.9	11.9	11.9	11.9	12.0	9.83
155	13.5	13.5	13.3	13.3	13.2	13.2	13.1	13.1	13.1	13.1	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.1	11.5
160	13.6	13.6	13.5	13.5	13.4	13.5	13.5	13.5	13.4	13.5	13.4	13.4	13.4	13.4	13.4	13.3	13.4	13.4	12.4
165	13.1	13.1	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.3	13.2	13.2	13.1	13.1	13.1	13.2	13.2	12.6
170	12.5	12.5	12.6	12.6	12.6	12.6	12.7	12.7	12.7	12.7	12.7	12.6	12.6	12.6	12.6	12.6	12.6	12.5	12.4
175	12.0	12.1	12.1	12.2	12.2	12.4	12.4	12.4	12.3	12.3	12.3	12.2	12.2	12.2	12.3	12.2	12.1	12.0	12.1
180	12.2	12.2	12.2	12.2	12.3	12.3	12.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.1	12.0	12.0	12.3

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:

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LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MCR-3 (19W, 36°)	TYPE:LED	WEIGHT:
SPEC.:	DIM.: 3inch	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	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713	4713		
5	4553	4514	4486	4481	4451	4447	4419	4413	4381	4385	4362	4377	4363	4386	4380	4409	4408		
10	3998	3906	3832	3820	3753	3749	3686	3679	3617	3620	3572	3593	3566	3603	3591	3642	3645		
15	3024	2903	2796	2789	2695	2702	2622	2634	2564	2588	2529	2565	2523	2574	2554	2627	2622		
20	1985	1893	1801	1792	1707	1704	1625	1623	1560	1572	1526	1560	1529	1583	1569	1637	1636		
25	1143	1069	1006	996	944	934	892	878	834	831	797	813	794	825	819	862	863		
30	565	523	479	470	436	425	392	382	349	342	313	324	309	330	328	358	369		
35	206	157	137	121	114	97.7	79.8	72.7	63.2	61.5	56.2	58.3	55.0	68.9	61.9	79.4	85.1		
40	44.9	41.0	38.7	36.3	34.6	32.1	30.0	28.6	27.3	26.6	25.8	25.5	25.0	25.2	24.9	25.5	25.8		
45	16.4	12.1	9.78	9.53	9.41	9.64	9.29	9.12	9.05	9.11	9.14	9.48	10.8	9.53	9.72	10.8	11.9		
50	8.07	7.90	7.77	7.45	7.43	7.55	7.51	7.37	7.35	7.37	7.49	7.55	7.67	7.47	7.49	7.65	7.95		
55	7.37	7.04	6.79	6.59	6.53	6.54	6.65	6.48	6.44	6.49	6.59	6.69	6.76	6.80	6.86	6.91	7.07		
60	5.70	5.45	5.37	5.22	5.19	5.17	5.25	5.26	5.32	5.37	5.41	5.48	5.61	5.71	5.85	5.85	5.92		
65	4.71	4.57	4.56	4.50	4.52	4.49	4.53	4.53	4.59	4.63	4.71	4.78	4.88	4.94	5.06	5.12	5.24		
70	3.95	3.75	3.61	3.55	3.39	3.38	3.35	3.38	3.38	3.42	3.48	3.56	3.64	3.76	3.88	4.04	4.15		
75	2.58	2.37	2.27	2.20	2.16	2.14	2.15	2.14	2.15	2.17	2.22	2.26	2.34	2.40	2.51	2.60	2.70		
80	1.55	1.38	1.32	1.25	1.24	1.21	1.22	1.19	1.19	1.19	1.22	1.23	1.29	1.33	1.40	1.46	1.55		
85	0.73	0.60	0.55	0.48	0.48	0.43	0.47	0.44	0.43	0.40	0.41	0.42	0.46	0.48	0.55	0.58	0.65		
90	0.13	0.05	0.08	0.05	0.04	0.05	0.05	0.05	0.06	0.04	0.05	0.05	0.05	0.05	0.11	0.08	0.11		
95	0.06	0.05	0.06	0.06	0.06	0.05	0.06	0.09	0.05	0.07	0.07	0.05	0.05	0.06	0.06	0.05	0.07		
100	0.07	0.07	0.06	0.08	0.08	0.08	0.09	0.09	0.06	0.09	0.08	0.09	0.08	0.07	0.07	0.07	0.06		
105	0.07	0.10	0.07	0.10	0.08	0.12	0.17	0.16	0.07	0.11	0.08	0.11	0.08	0.11	0.08	0.11	0.07		
110	0.12	0.17	0.13	0.18	0.16	0.21	0.23	0.26	0.19	0.22	0.20	0.22	0.19	0.22	0.18	0.21	0.16		
115	0.28	0.34	0.34	0.38	0.35	0.41	0.43	0.48	0.43	0.47	0.44	0.47	0.44	0.46	0.43	0.45	0.43		
120	0.65	0.75	0.76	0.81	0.81	0.85	0.86	0.91	0.92	0.94	0.95	0.98	0.95	0.96	0.94	0.94	0.90		
125	1.34	1.48	1.51	1.57	1.61	1.64	1.68	1.73	1.77	1.79	1.82	1.82	1.83	1.81	1.79	1.76	1.73		
130	2.45	2.61	2.71	2.77	2.87	2.90	2.99	3.02	3.12	3.10	3.17	3.13	3.16	3.11	3.10	3.03	2.99		
135	3.98	4.19	4.34	4.39	4.52	4.56	4.68	4.72	4.86	4.85	4.91	4.85	4.90	4.82	4.81	4.71	4.68		
140	5.88	6.12	6.28	6.34	6.48	6.52	6.65	6.69	6.84	6.84	6.91	6.84	6.89	6.80	6.81	6.67	6.65		
145	7.93	8.16	8.34	8.39	8.53	8.57	8.72	8.73	8.89	8.89	8.97	8.90	8.93	8.84	8.85	8.72	8.70		
150	9.89	10.1	10.2	10.3	10.4	10.4	10.6	10.6	10.7	10.7	10.8	10.7	10.7	10.7	10.7	10.6	10.6		
155	11.5	11.6	11.7	11.7	11.8	11.8	11.9	11.9	12.0	12.0	12.0	12.0	12.0	11.9	11.9	11.9	11.9		
160	12.3	12.5	12.4	12.5	12.4	12.4	12.5	12.5	12.5	12.6	12.6	12.5	12.5	12.4	12.5	12.4	12.5		
165	12.6	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.4	12.5		
170	12.3	12.3	12.3	12.2	12.1	12.1	12.1	12.1	12.2	12.2	12.2	12.1	12.1	12.0	12.0	12.0	12.1		
175	12.1	12.1	12.1	12.1	12.1	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.9	11.8	11.8	11.8		
180	12.2	12.2	12.2	12.3	12.3	12.3	12.2	12.2	12.2	12.2	12.1	12.2	12.2	12.2	12.1	12.0	12.0		

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:

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