

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P558246

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-87-EDD-90**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P558246  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUSL-12-4-LD4-3STD-30-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

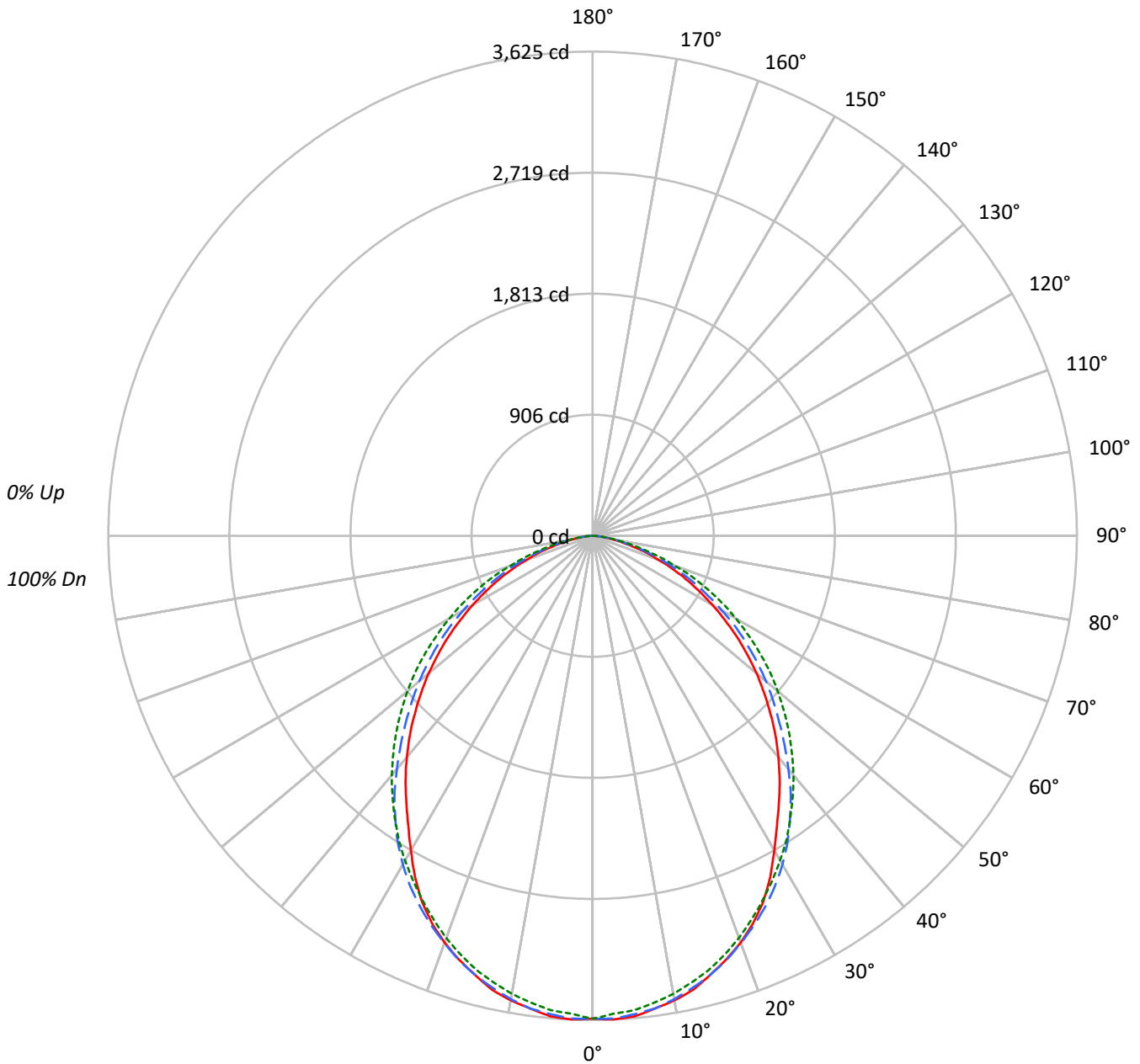
Lumens per Lamp: N/A  
Luminaire Lumens: 8360.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9729	9729	9729
5°	9755	9714	9631
10°	9651	9625	9515
15°	9480	9480	9372
20°	9280	9291	9172
25°	8974	9085	8941
30°	8451	8830	8722
35°	7985	8464	8478
40°	7597	8007	8216
45°	7163	7522	7908
50°	6705	7088	7571
55°	6184	6594	7162
60°	5569	6018	6661
65°	4918	5351	6058
70°	4098	4557	5147
75°	3220	3639	4029
80°	2303	2562	2841
85°	1501	1501	1414



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	340.4	4.1
10°-20°	956.3	11.4
20°-30°	1397.5	16.7
30°-40°	1586.3	19.0
40°-50°	1531.3	18.3
50°-60°	1263.2	15.1
60°-70°	841.2	10.1
70°-80°	376.4	4.5
80°-90°	67.3	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2694.2	32.2
0°-40°	4280.5	51.2
0°-60°	7075.0	84.6
0°-90°	8360.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8360.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3616	3616	3616	3616	3616	
5°	3611	3610	3596	3577	3566	342
15°	3403	3411	3403	3388	3364	959
25°	3022	3046	3060	3038	3011	1384
35°	2431	2464	2576	2590	2581	1523
45°	1882	1914	1976	2067	2078	1452
55°	1318	1340	1406	1483	1526	1176
65°	772	793	840	900	951	766
75°	310	326	350	367	388	339
85°	49	49	49	46	46	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3615.5	3615.5	3615.5	3615.5	3615.5
2.5°	3625.2	3626.6	3618.3	3596.0	3582.1
5°	3611.3	3609.9	3596.0	3576.6	3565.5
7.5°	3571.0	3573.8	3569.6	3541.9	3526.6
10°	3532.1	3533.5	3522.4	3500.2	3482.1
12.5°	3482.1	3480.8	3465.5	3454.4	3425.2
15°	3403.0	3411.3	3403.0	3387.7	3364.1
17.5°	3326.6	3326.6	3332.1	3305.7	3287.7
20°	3240.5	3244.6	3244.6	3223.8	3203.0
22.5°	3140.5	3153.0	3157.1	3134.9	3109.9
25°	3022.4	3046.0	3059.9	3037.7	3011.3
27.5°	2879.3	2915.4	2957.1	2940.4	2911.3
30°	2719.6	2772.4	2841.8	2827.9	2807.1
32.5°	2568.2	2621.0	2716.8	2711.3	2700.2
35°	2430.7	2464.0	2576.5	2590.4	2580.7
37.5°	2300.1	2330.7	2436.3	2468.2	2459.9
40°	2162.6	2196.0	2279.3	2336.2	2339.0
42.5°	2026.5	2058.5	2126.5	2208.5	2208.5
45°	1882.1	1914.0	1976.5	2066.8	2077.9
47.5°	1740.4	1773.7	1834.8	1925.1	1943.2
50°	1601.5	1632.0	1693.2	1780.7	1808.4
52.5°	1457.0	1490.4	1550.1	1630.6	1670.9
55°	1318.1	1340.4	1405.6	1483.4	1526.5
57.5°	1173.7	1194.5	1268.1	1334.8	1379.2
60°	1034.8	1061.2	1118.1	1186.2	1237.6
62.5°	901.4	929.2	977.8	1037.6	1095.9
65°	772.3	793.1	840.3	900.1	951.4
67.5°	647.3	665.3	712.5	754.2	808.4
70°	520.9	544.5	579.2	619.5	654.2
72.5°	419.5	429.2	458.4	487.5	523.6
75°	309.7	326.4	350.0	366.7	387.5
77.5°	222.2	232.0	245.8	259.7	279.2
80°	148.6	152.8	165.3	168.1	183.3
82.5°	90.3	93.1	95.8	97.2	102.8
85°	48.6	48.6	48.6	45.8	45.8
87.5°	27.8	27.8	23.6	19.4	13.9
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)