

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: P556457

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-93-88-EDD**

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: P556457
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-LD4-1LO-30-UNV-93-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

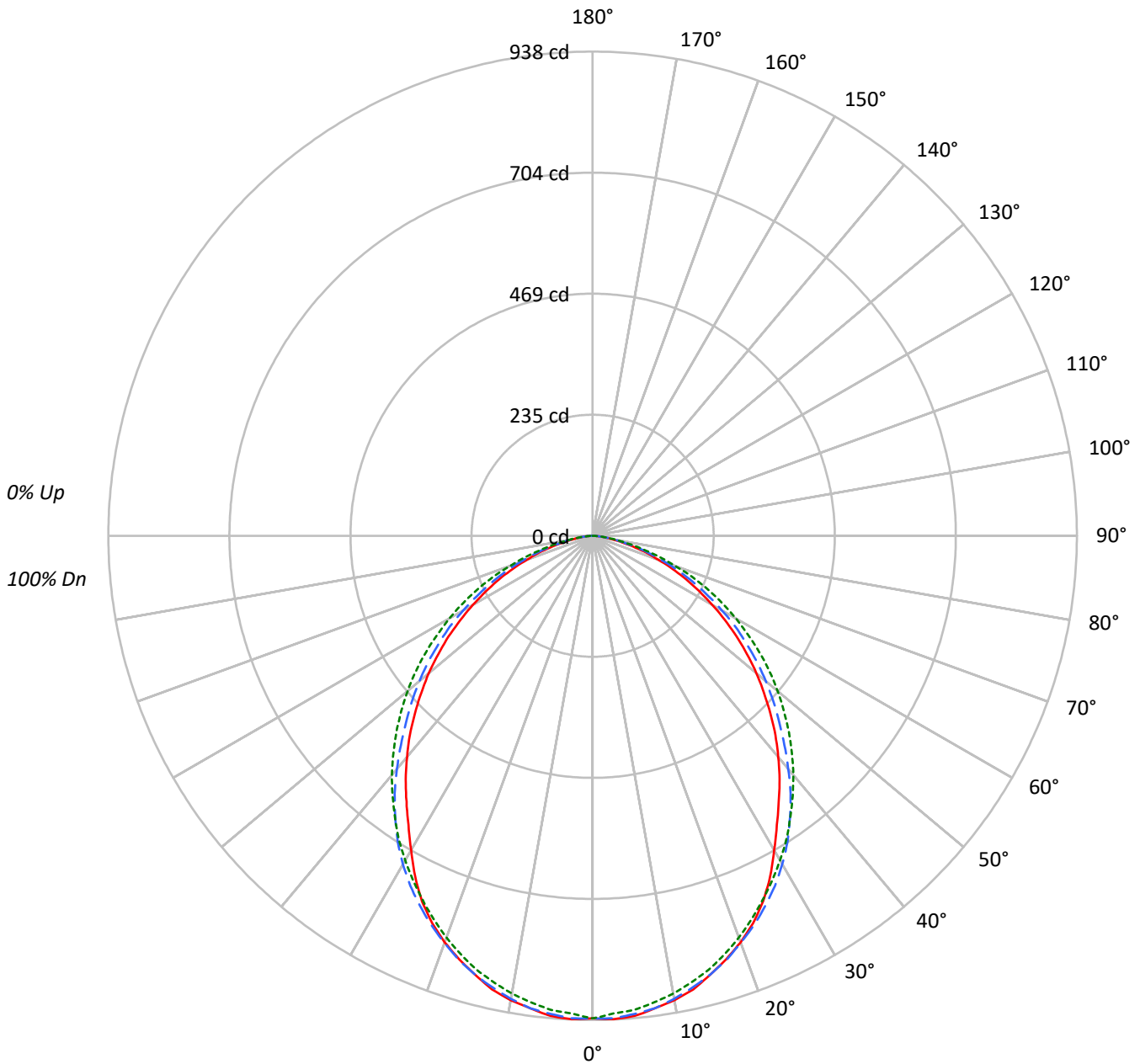
Lumens per Lamp: N/A
Luminaire Lumens: 2162.0 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	2516	2516	2516
5°	2523	2512	2491
10°	2496	2489	2461
15°	2452	2452	2424
20°	2400	2403	2372
25°	2321	2350	2312
30°	2185	2284	2256
35°	2065	2189	2192
40°	1965	2071	2125
45°	1852	1945	2045
50°	1734	1833	1958
55°	1599	1705	1852
60°	1440	1556	1723
65°	1272	1384	1567
70°	1060	1179	1331
75°	833	941	1042
80°	595	662	735
85°	389	389	367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	4.1
10°-20°	247.3	11.4
20°-30°	361.4	16.7
30°-40°	410.2	19.0
40°-50°	396.0	18.3
50°-60°	326.7	15.1
60°-70°	217.6	10.1
70°-80°	97.3	4.5
80°-90°	17.4	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°	696.7	32.2
0°-40°	1107.0	51.2
0°-60°	1829.7	84.6
0°-90°	2162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	935	935	935	935	935	
5°	934	934	930	925	922	88
15°	880	882	880	876	870	248
25°	782	788	791	786	779	358
35°	629	637	666	670	667	394
45°	487	495	511	534	537	376
55°	341	347	364	384	395	304
65°	200	205	217	233	246	198
75°	80	84	90	95	100	88
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	935.0	935.0	935.0	935.0	935.0
2.5°	937.5	937.9	935.7	930.0	926.4
5°	933.9	933.6	930.0	925.0	922.1
7.5°	923.5	924.2	923.2	916.0	912.0
10°	913.5	913.8	910.9	905.2	900.5
12.5°	900.5	900.2	896.2	893.3	885.8
15°	880.1	882.2	880.1	876.1	870.0
17.5°	860.3	860.3	861.7	854.9	850.2
20°	838.0	839.1	839.1	833.7	828.3
22.5°	812.2	815.4	816.5	810.7	804.3
25°	781.6	787.7	791.3	785.6	778.8
27.5°	744.6	754.0	764.7	760.4	752.9
30°	703.3	717.0	734.9	731.3	726.0
32.5°	664.2	677.8	702.6	701.2	698.3
35°	628.6	637.2	666.3	669.9	667.4
37.5°	594.8	602.7	630.0	638.3	636.2
40°	559.3	567.9	589.5	604.2	604.9
42.5°	524.1	532.3	549.9	571.1	571.1
45°	486.7	495.0	511.1	534.5	537.4
47.5°	450.1	458.7	474.5	497.9	502.5
50°	414.2	422.1	437.9	460.5	467.7
52.5°	376.8	385.4	400.9	421.7	432.1
55°	340.9	346.6	363.5	383.6	394.8
57.5°	303.5	308.9	328.0	345.2	356.7
60°	267.6	274.4	289.2	306.8	320.1
62.5°	233.1	240.3	252.9	268.3	283.4
65°	199.7	205.1	217.3	232.8	246.1
67.5°	167.4	172.1	184.3	195.0	209.1
70°	134.7	140.8	149.8	160.2	169.2
72.5°	108.5	111.0	118.5	126.1	135.4
75°	80.1	84.4	90.5	94.8	100.2
77.5°	57.5	60.0	63.6	67.2	72.2
80°	38.4	39.5	42.7	43.5	47.4
82.5°	23.3	24.1	24.8	25.1	26.6
85°	12.6	12.6	12.6	11.9	11.9
87.5°	7.2	7.2	6.1	5.0	3.6
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)