

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: P558254

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-97-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: P558254
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-93-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

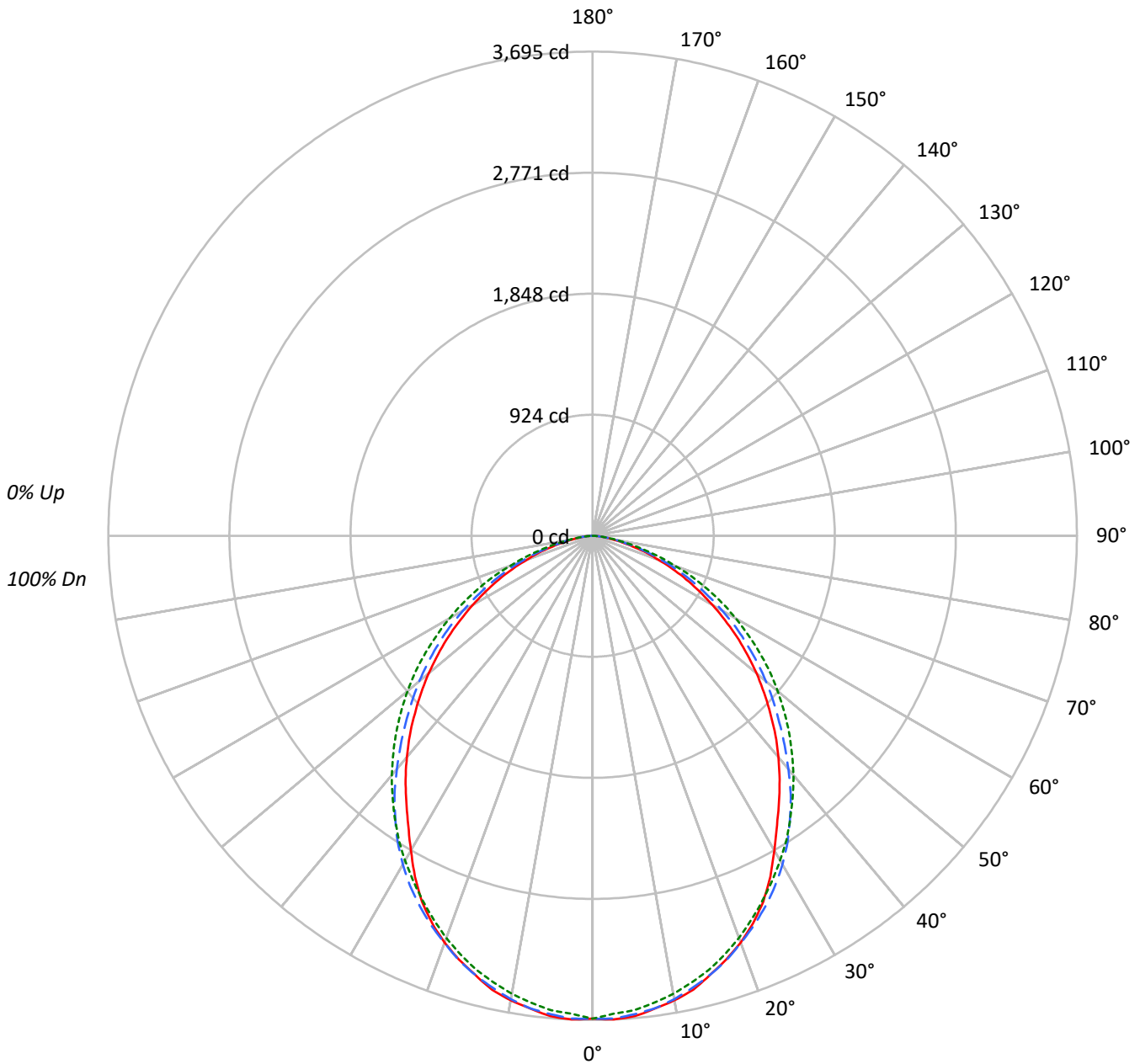
Lumens per Lamp: N/A
Luminaire Lumens: 8521.0 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (Ain): 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					20					
RC	80					70					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	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86	86	86	86		
	2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73	73	73	73	73		
	3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63		
	4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54	54	54	54	54	54		
	5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47	47	47	47	47	47		
	6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42	42	42		
	7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37	37	37		
	8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34	34	34	34	34	34		
	9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30	30	30		
	10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28	28	28	28	28	28		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9917	9917	9917
5°	9943	9901	9817
10°	9838	9810	9698
15°	9663	9663	9553
20°	9458	9470	9349
25°	9147	9260	9113
30°	8613	9001	8891
35°	8139	8627	8641
40°	7743	8161	8375
45°	7300	7667	8060
50°	6833	7225	7717
55°	6303	6722	7300
60°	5676	6134	6789
65°	5012	5454	6175
70°	4177	4645	5246
75°	3282	3710	4107
80°	2348	2611	2896
85°	1531	1531	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.0	4.1
10°-20°	974.7	11.4
20°-30°	1424.4	16.7
30°-40°	1616.8	19.0
40°-50°	1560.8	18.3
50°-60°	1287.6	15.1
60°-70°	857.4	10.1
70°-80°	383.7	4.5
80°-90°	68.7	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°	2746.1	32.2
0°-40°	4362.9	51.2
0°-60°	7211.3	84.6
0°-90°	8521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3685	3685	3685	3685	3685	
5°	3681	3679	3665	3646	3634	348
15°	3468	3477	3468	3453	3429	978
25°	3081	3105	3119	3096	3069	1411
35°	2478	2512	2626	2640	2630	1552
45°	1918	1951	2015	2107	2118	1480
55°	1344	1366	1433	1512	1556	1199
65°	787	808	856	917	970	780
75°	316	333	357	374	395	345
85°	50	50	50	47	47	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3685.1	3685.1	3685.1	3685.1	3685.1
2.5°	3695.0	3696.4	3687.9	3665.3	3651.1
5°	3680.9	3679.4	3665.3	3645.5	3634.1
7.5°	3639.8	3642.6	3638.4	3610.1	3594.5
10°	3600.2	3601.6	3590.3	3567.6	3549.2
12.5°	3549.2	3547.8	3532.2	3520.9	3491.2
15°	3468.5	3477.0	3468.5	3452.9	3428.9
17.5°	3390.6	3390.6	3396.3	3369.4	3351.0
20°	3302.9	3307.1	3307.1	3285.9	3264.6
22.5°	3200.9	3213.7	3217.9	3195.3	3169.8
25°	3080.6	3104.7	3118.8	3096.2	3069.3
27.5°	2934.8	2971.6	3014.1	2997.1	2967.3
30°	2772.0	2825.8	2896.6	2882.4	2861.2
32.5°	2617.7	2671.5	2769.1	2763.5	2752.2
35°	2477.5	2511.5	2626.2	2640.3	2630.4
37.5°	2344.4	2375.6	2483.2	2515.7	2507.2
40°	2204.3	2238.2	2323.2	2381.2	2384.1
42.5°	2065.5	2098.1	2167.5	2251.0	2251.0
45°	1918.3	1950.9	2014.6	2106.6	2117.9
47.5°	1773.9	1807.9	1870.2	1962.2	1980.6
50°	1632.3	1663.5	1725.8	1814.9	1843.3
52.5°	1485.1	1519.1	1579.9	1662.1	1703.1
55°	1343.5	1366.2	1432.7	1512.0	1555.9
57.5°	1196.3	1217.5	1292.6	1360.5	1405.8
60°	1054.7	1081.6	1139.7	1209.0	1261.4
62.5°	918.8	947.1	996.7	1057.5	1117.0
65°	787.1	808.4	856.5	917.4	969.8
67.5°	659.7	678.1	726.3	768.7	823.9
70°	530.9	555.0	590.4	631.4	666.8
72.5°	427.5	437.5	467.2	496.9	533.7
75°	315.7	332.7	356.8	373.7	395.0
77.5°	226.5	236.4	250.6	264.7	284.6
80°	151.5	155.7	168.5	171.3	186.9
82.5°	92.0	94.9	97.7	99.1	104.8
85°	49.6	49.6	49.6	46.7	46.7
87.5°	28.3	28.3	24.1	19.8	14.2
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)