

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: P556387

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-85-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: P556387
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-LD4-1HI-50-UNV-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

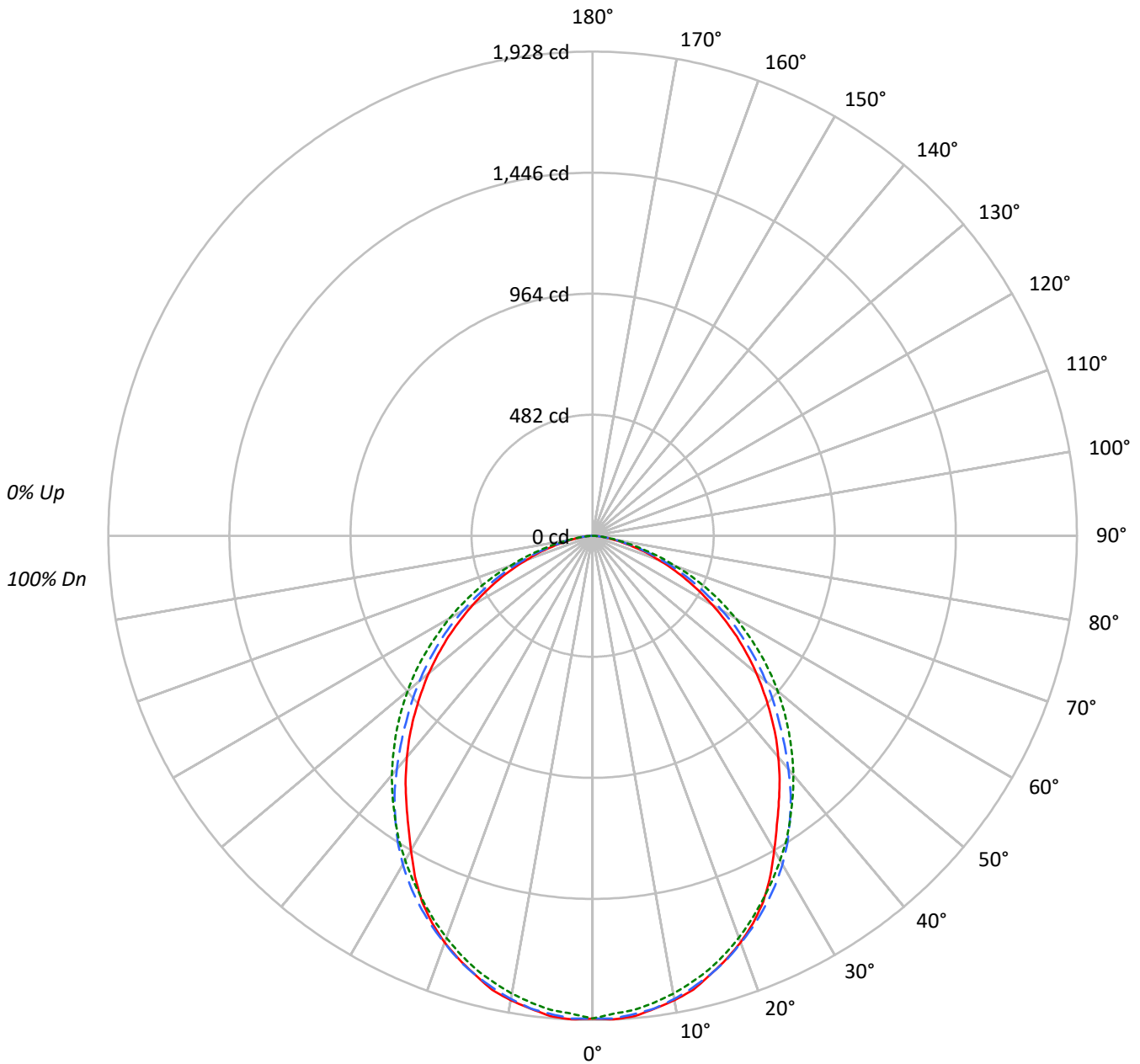
Lumens per Lamp: N/A
Luminaire Lumens: 4445.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	5173	5173	5173
5°	5187	5165	5121
10°	5132	5118	5059
15°	5041	5041	4983
20°	4934	4940	4877
25°	4771	4831	4754
30°	4493	4695	4638
35°	4246	4500	4508
40°	4039	4257	4369
45°	3808	3999	4204
50°	3565	3769	4025
55°	3288	3506	3808
60°	2961	3200	3541
65°	2614	2845	3221
70°	2179	2423	2736
75°	1712	1935	2142
80°	1224	1362	1511
85°	797	797	753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.0	4.1
10°-20°	508.5	11.4
20°-30°	743.0	16.7
30°-40°	843.4	19.0
40°-50°	814.2	18.3
50°-60°	671.7	15.1
60°-70°	447.3	10.1
70°-80°	200.1	4.5
80°-90°	35.8	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°	1432.5	32.2
0°-40°	2275.9	51.2
0°-60°	3761.8	84.6
0°-90°	4445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4445.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1922	1922	1922	1922	1922	
5°	1920	1919	1912	1902	1896	182
15°	1809	1814	1809	1801	1789	510
25°	1607	1620	1627	1615	1601	736
35°	1292	1310	1370	1377	1372	810
45°	1001	1018	1051	1099	1105	772
55°	701	713	747	789	812	626
65°	411	422	447	479	506	407
75°	165	174	186	195	206	180
85°	26	26	26	24	24	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1922.3	1922.3	1922.3	1922.3	1922.3
2.5°	1927.5	1928.3	1923.8	1912.0	1904.6
5°	1920.1	1919.4	1912.0	1901.7	1895.8
7.5°	1898.7	1900.2	1898.0	1883.2	1875.1
10°	1878.0	1878.8	1872.9	1861.1	1851.5
12.5°	1851.5	1850.7	1842.6	1836.7	1821.2
15°	1809.4	1813.8	1809.4	1801.2	1788.7
17.5°	1768.7	1768.7	1771.7	1757.7	1748.1
20°	1722.9	1725.2	1725.2	1714.1	1703.0
22.5°	1669.8	1676.4	1678.6	1666.8	1653.5
25°	1607.0	1619.6	1626.9	1615.1	1601.1
27.5°	1530.9	1550.1	1572.3	1563.4	1547.9
30°	1446.0	1474.1	1511.0	1503.6	1492.5
32.5°	1365.5	1393.6	1444.5	1441.6	1435.7
35°	1292.4	1310.1	1369.9	1377.3	1372.2
37.5°	1223.0	1239.2	1295.4	1312.3	1307.9
40°	1149.9	1167.6	1211.9	1242.2	1243.7
42.5°	1077.5	1094.5	1130.7	1174.2	1174.2
45°	1000.7	1017.7	1050.9	1098.9	1104.8
47.5°	925.4	943.1	975.6	1023.6	1033.2
50°	851.5	867.8	900.2	946.8	961.5
52.5°	774.7	792.4	824.2	867.0	888.4
55°	700.8	712.7	747.4	788.7	811.6
57.5°	624.0	635.1	674.3	709.7	733.3
60°	550.2	564.2	594.5	630.7	658.0
62.5°	479.3	494.1	519.9	551.7	582.7
65°	410.6	421.7	446.8	478.6	505.9
67.5°	344.1	353.7	378.9	401.0	429.8
70°	276.9	289.5	308.0	329.4	347.8
72.5°	223.0	228.2	243.7	259.2	278.4
75°	164.7	173.6	186.1	195.0	206.0
77.5°	118.2	123.3	130.7	138.1	148.4
80°	79.0	81.2	87.9	89.4	97.5
82.5°	48.0	49.5	51.0	51.7	54.6
85°	25.8	25.8	25.8	24.4	24.4
87.5°	14.8	14.8	12.6	10.3	7.4
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)