

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: P557415

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-87-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: P557415
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-LD4-2LO-50-UNV-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

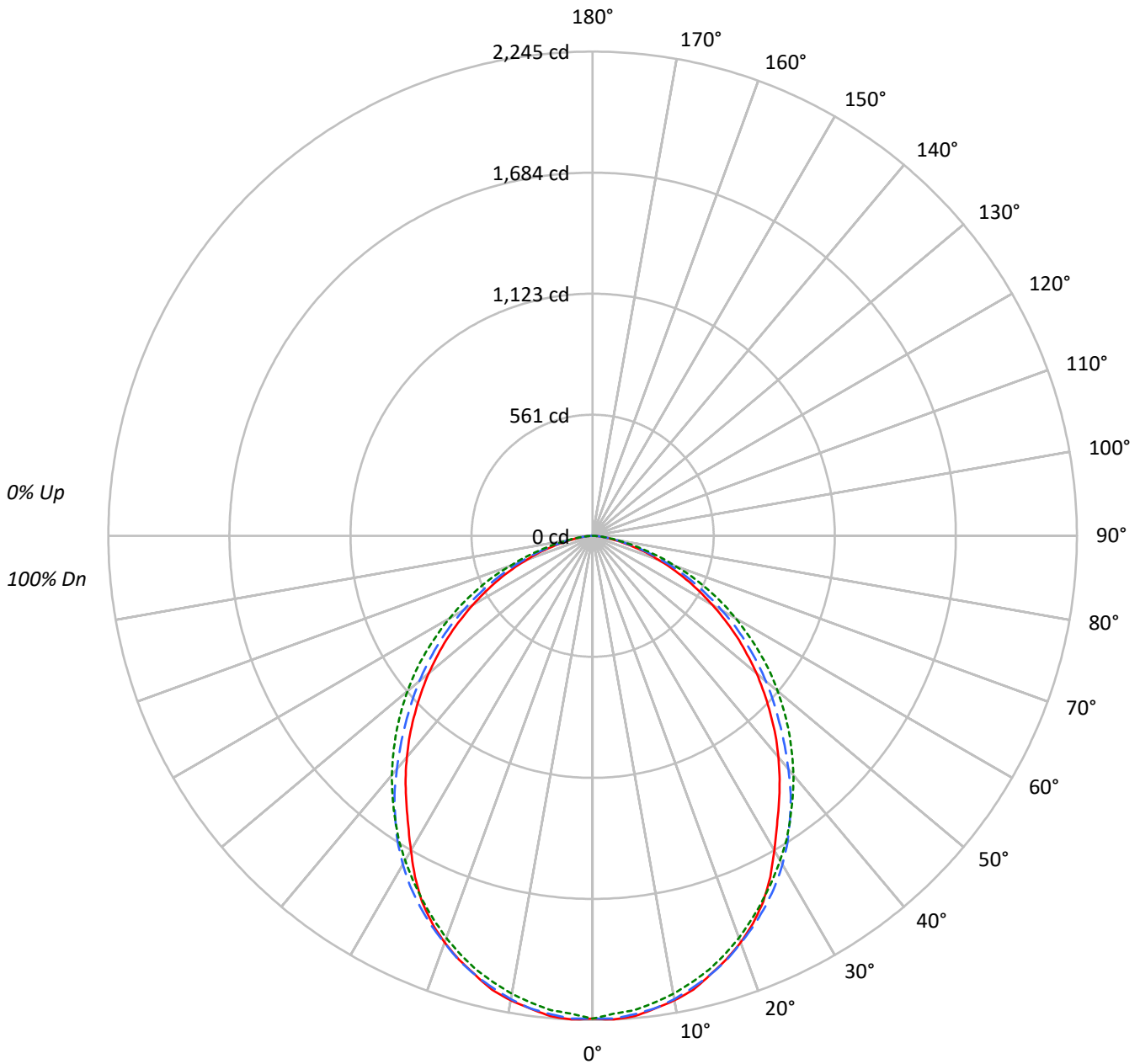
Lumens per Lamp: N/A
Luminaire Lumens: 5177.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	6025	6025	6025
5°	6041	6015	5964
10°	5977	5960	5892
15°	5871	5871	5804
20°	5747	5754	5680
25°	5557	5626	5537
30°	5233	5468	5401
35°	4945	5241	5250
40°	4704	4958	5088
45°	4435	4658	4897
50°	4152	4389	4688
55°	3830	4084	4435
60°	3449	3726	4125
65°	3045	3314	3752
70°	2537	2822	3187
75°	1994	2254	2495
80°	1426	1587	1759
85°	929	929	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.8	4.1
10°-20°	592.2	11.4
20°-30°	865.4	16.7
30°-40°	982.3	19.0
40°-50°	948.3	18.3
50°-60°	782.3	15.1
60°-70°	520.9	10.1
70°-80°	233.1	4.5
80°-90°	41.7	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°	1668.4	32.2
0°-40°	2650.7	51.2
0°-60°	4381.3	84.6
0°-90°	5177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2239	2239	2239	2239	2239	
5°	2236	2236	2227	2215	2208	212
15°	2107	2112	2107	2098	2083	594
25°	1872	1886	1895	1881	1865	857
35°	1505	1526	1596	1604	1598	943
45°	1166	1185	1224	1280	1287	899
55°	816	830	870	919	945	729
65°	478	491	520	557	589	474
75°	192	202	217	227	240	210
85°	30	30	30	28	28	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2244.9	2245.8	2240.6	2226.9	2218.3
5°	2236.3	2235.5	2226.9	2214.8	2208.0
7.5°	2211.4	2213.1	2210.5	2193.3	2183.9
10°	2187.3	2188.2	2181.3	2167.5	2156.3
12.5°	2156.3	2155.5	2146.0	2139.1	2121.1
15°	2107.3	2112.5	2107.3	2097.9	2083.2
17.5°	2060.0	2060.0	2063.5	2047.1	2035.9
20°	2006.7	2009.3	2009.3	1996.4	1983.5
22.5°	1944.8	1952.5	1955.1	1941.3	1925.8
25°	1871.6	1886.3	1894.9	1881.1	1864.8
27.5°	1783.0	1805.4	1831.2	1820.9	1802.8
30°	1684.1	1716.8	1759.8	1751.2	1738.3
32.5°	1590.4	1623.1	1682.4	1679.0	1672.1
35°	1505.2	1525.9	1595.5	1604.1	1598.1
37.5°	1424.4	1443.3	1508.7	1528.5	1523.3
40°	1339.2	1359.9	1411.5	1446.7	1448.5
42.5°	1254.9	1274.7	1316.9	1367.6	1367.6
45°	1165.5	1185.3	1224.0	1279.9	1286.8
47.5°	1077.7	1098.4	1136.2	1192.1	1203.3
50°	991.7	1010.7	1048.5	1102.7	1119.9
52.5°	902.3	922.9	959.9	1009.8	1034.7
55°	816.3	830.0	870.5	918.6	945.3
57.5°	726.8	739.7	785.3	826.6	854.1
60°	640.8	657.1	692.4	734.6	766.4
62.5°	558.2	575.4	605.5	642.5	678.6
65°	478.2	491.1	520.4	557.4	589.2
67.5°	400.8	412.0	441.2	467.1	500.6
70°	322.5	337.2	358.7	383.6	405.1
72.5°	259.8	265.8	283.8	301.9	324.3
75°	191.8	202.1	216.8	227.1	240.0
77.5°	137.6	143.6	152.2	160.8	172.9
80°	92.0	94.6	102.4	104.1	113.5
82.5°	55.9	57.6	59.3	60.2	63.6
85°	30.1	30.1	30.1	28.4	28.4
87.5°	17.2	17.2	14.6	12.0	8.6
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)