

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: P557353

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-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: P557353
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-40-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 4000K CCT LEDES
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

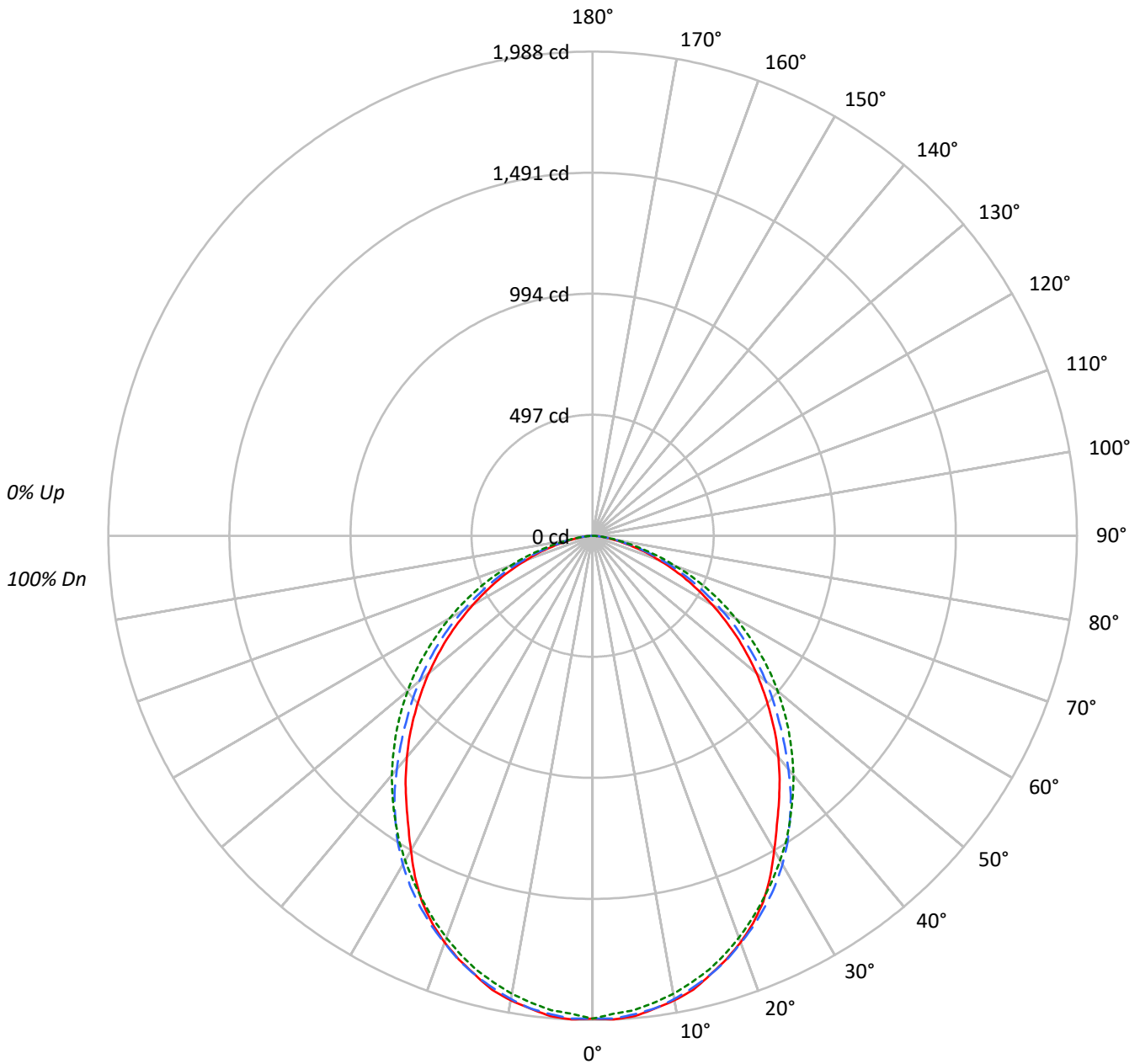
Lumens per Lamp: N/A
Luminaire Lumens: 4584.0 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5335	5335	5335
5°	5349	5326	5281
10°	5292	5278	5217
15°	5198	5198	5139
20°	5088	5095	5029
25°	4921	4982	4903
30°	4634	4842	4783
35°	4378	4641	4649
40°	4166	4390	4505
45°	3927	4125	4336
50°	3676	3887	4151
55°	3391	3616	3927
60°	3054	3300	3652
65°	2697	2934	3322
70°	2247	2499	2822
75°	1765	1995	2209
80°	1263	1404	1557
85°	824	824	775



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.7	4.1
10°-20°	524.4	11.4
20°-30°	766.3	16.7
30°-40°	869.8	19.0
40°-50°	839.7	18.3
50°-60°	692.7	15.1
60°-70°	461.3	10.1
70°-80°	206.4	4.5
80°-90°	36.9	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°	1477.3	32.2
0°-40°	2347.1	51.2
0°-60°	3879.4	84.6
0°-90°	4584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1982	1982	1982	1982	1982	
5°	1980	1979	1972	1961	1955	187
15°	1866	1870	1866	1858	1845	526
25°	1657	1670	1678	1666	1651	759
35°	1333	1351	1413	1420	1415	835
45°	1032	1050	1084	1133	1139	796
55°	723	735	771	813	837	645
65°	424	435	461	494	522	420
75°	170	179	192	201	212	186
85°	27	27	27	25	25	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1982.5	1982.5	1982.5	1982.5	1982.5
2.5°	1987.8	1988.6	1984.0	1971.8	1964.2
5°	1980.2	1979.4	1971.8	1961.1	1955.0
7.5°	1958.1	1959.6	1957.3	1942.1	1933.7
10°	1936.8	1937.5	1931.4	1919.2	1909.3
12.5°	1909.3	1908.6	1900.2	1894.1	1878.1
15°	1865.9	1870.5	1865.9	1857.6	1844.6
17.5°	1824.0	1824.0	1827.1	1812.6	1802.7
20°	1776.8	1779.1	1779.1	1767.7	1756.3
22.5°	1722.0	1728.8	1731.1	1718.9	1705.2
25°	1657.3	1670.2	1677.8	1665.6	1651.2
27.5°	1578.8	1598.6	1621.5	1612.3	1596.3
30°	1491.2	1520.2	1558.2	1550.6	1539.2
32.5°	1408.2	1437.2	1489.7	1486.7	1480.6
35°	1332.8	1351.1	1412.8	1420.4	1415.1
37.5°	1261.2	1278.0	1335.9	1353.4	1348.8
40°	1185.8	1204.1	1249.8	1281.0	1282.5
42.5°	1111.2	1128.7	1166.0	1211.0	1211.0
45°	1032.0	1049.5	1083.8	1133.3	1139.4
47.5°	954.3	972.6	1006.1	1055.6	1065.5
50°	878.1	894.9	928.4	976.4	991.6
52.5°	798.9	817.2	850.0	894.1	916.2
55°	722.8	735.0	770.7	813.4	837.0
57.5°	643.6	655.0	695.3	731.9	756.3
60°	567.4	581.9	613.1	650.4	678.6
62.5°	494.3	509.5	536.2	568.9	600.9
65°	423.5	434.9	460.8	493.5	521.7
67.5°	354.9	364.8	390.7	413.6	443.3
70°	285.6	298.5	317.6	339.7	358.7
72.5°	230.0	235.3	251.3	267.3	287.1
75°	169.8	179.0	191.9	201.1	212.5
77.5°	121.9	127.2	134.8	142.4	153.1
80°	81.5	83.8	90.6	92.2	100.5
82.5°	49.5	51.0	52.6	53.3	56.4
85°	26.7	26.7	26.7	25.1	25.1
87.5°	15.2	15.2	12.9	10.7	7.6
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)