

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: P556291

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-81-85-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: P556291
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-40-UNV-81-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

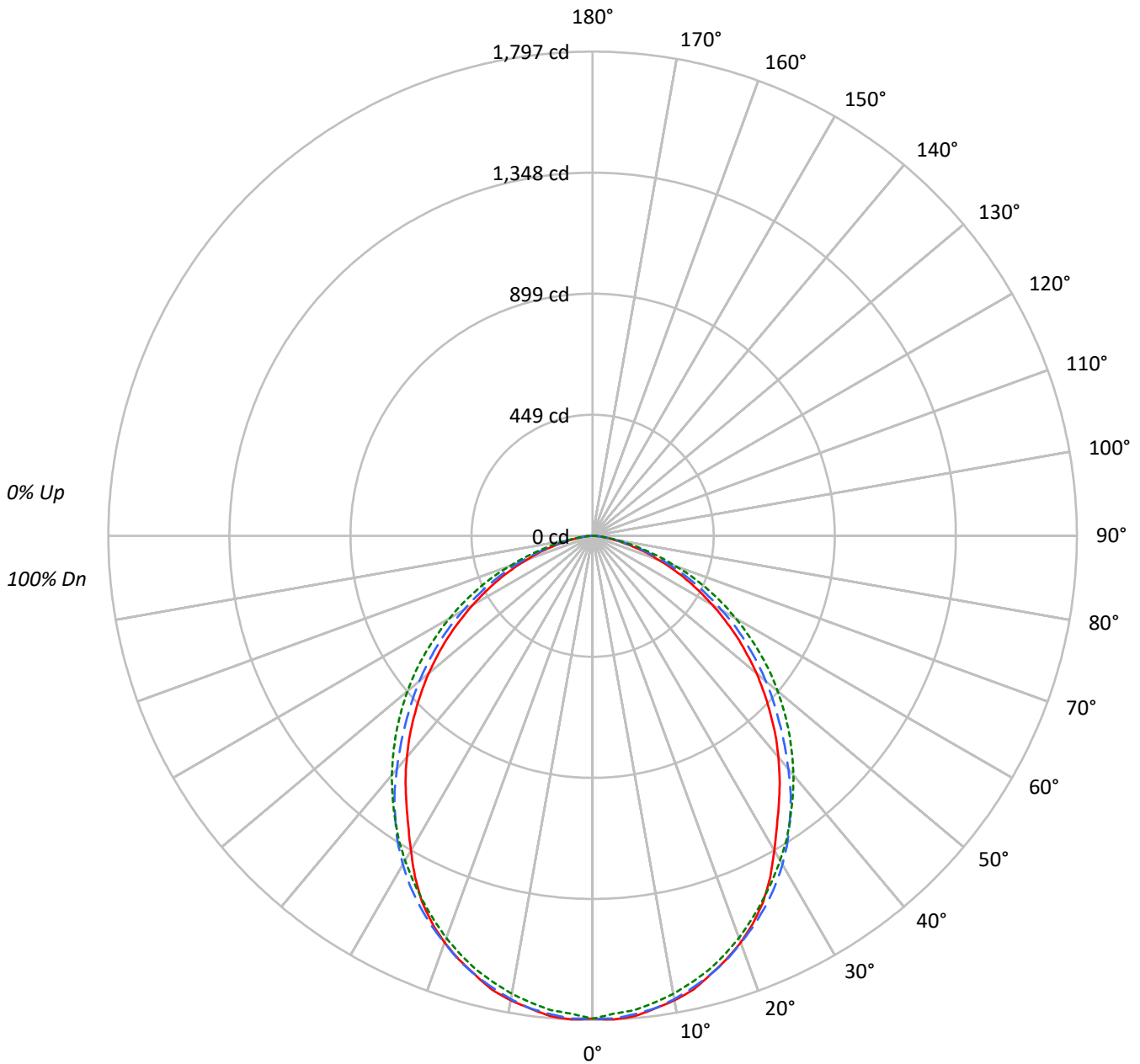
Lumens per Lamp: N/A
Luminaire Lumens: 4144.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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									
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°	4823	4823	4823
5°	4836	4815	4774
10°	4784	4771	4717
15°	4699	4699	4646
20°	4600	4606	4547
25°	4448	4504	4432
30°	4189	4377	4324
35°	3958	4196	4202
40°	3766	3969	4073
45°	3550	3728	3920
50°	3323	3514	3753
55°	3065	3269	3550
60°	2760	2983	3302
65°	2437	2652	3003
70°	2031	2259	2552
75°	1596	1804	1997
80°	1142	1269	1409
85°	744	744	701



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.7	4.1
10°-20°	474.0	11.4
20°-30°	692.7	16.7
30°-40°	786.3	19.0
40°-50°	759.1	18.3
50°-60°	626.2	15.1
60°-70°	417.0	10.1
70°-80°	186.6	4.5
80°-90°	33.4	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°	1335.5	32.2
0°-40°	2121.8	51.2
0°-60°	3507.1	84.6
0°-90°	4144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1792	1792	1792	1792	1792	
5°	1790	1789	1782	1773	1767	169
15°	1687	1691	1687	1679	1668	476
25°	1498	1510	1517	1506	1493	686
35°	1205	1221	1277	1284	1279	755
45°	933	949	980	1024	1030	720
55°	653	664	697	735	757	583
65°	383	393	416	446	472	380
75°	154	162	174	182	192	168
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1792.2	1792.2	1792.2	1792.2	1792.2
2.5°	1797.0	1797.7	1793.5	1782.5	1775.6
5°	1790.1	1789.4	1782.5	1772.9	1767.4
7.5°	1770.1	1771.5	1769.5	1755.7	1748.1
10°	1750.9	1751.6	1746.0	1735.0	1726.1
12.5°	1726.1	1725.4	1717.8	1712.3	1697.8
15°	1686.8	1691.0	1686.8	1679.3	1667.6
17.5°	1649.0	1649.0	1651.7	1638.6	1629.7
20°	1606.3	1608.3	1608.3	1598.0	1587.7
22.5°	1556.7	1562.9	1565.0	1554.0	1541.6
25°	1498.2	1509.9	1516.8	1505.8	1492.7
27.5°	1427.3	1445.2	1465.8	1457.6	1443.1
30°	1348.1	1374.3	1408.7	1401.8	1391.5
32.5°	1273.0	1299.2	1346.7	1344.0	1338.4
35°	1204.9	1221.4	1277.2	1284.1	1279.2
37.5°	1140.2	1155.3	1207.6	1223.5	1219.3
40°	1072.0	1088.5	1129.8	1158.1	1159.4
42.5°	1004.5	1020.4	1054.1	1094.7	1094.7
45°	932.9	948.8	979.7	1024.5	1030.0
47.5°	862.7	879.2	909.5	954.3	963.2
50°	793.8	809.0	839.3	882.7	896.4
52.5°	722.2	738.8	768.4	808.3	828.3
55°	653.4	664.4	696.8	735.3	756.7
57.5°	581.8	592.1	628.6	661.7	683.7
60°	512.9	526.0	554.2	588.0	613.5
62.5°	446.8	460.6	484.7	514.3	543.2
65°	382.8	393.1	416.5	446.1	471.6
67.5°	320.8	329.8	353.2	373.9	400.7
70°	258.2	269.9	287.1	307.1	324.3
72.5°	207.9	212.7	227.2	241.7	259.6
75°	153.5	161.8	173.5	181.8	192.1
77.5°	110.2	115.0	121.9	128.8	138.4
80°	73.7	75.7	81.9	83.3	90.9
82.5°	44.8	46.1	47.5	48.2	50.9
85°	24.1	24.1	24.1	22.7	22.7
87.5°	13.8	13.8	11.7	9.6	6.9
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)