

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: P556301

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-81-96-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: P556301
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-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

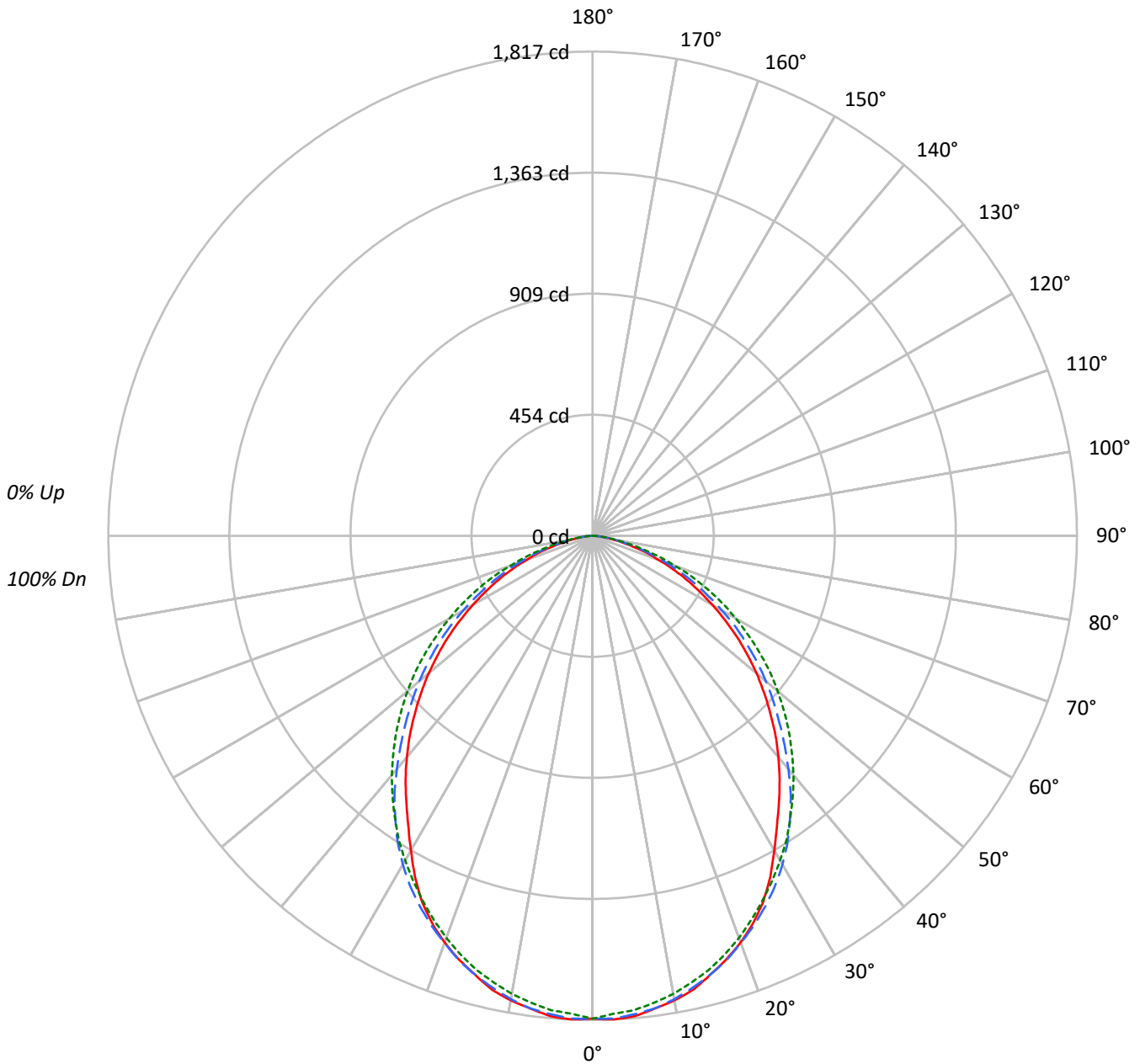
Lumens per Lamp: N/A
Luminaire Lumens: 4190.0 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4876	4876	4876
5°	4889	4868	4827
10°	4837	4824	4769
15°	4752	4752	4697
20°	4651	4657	4597
25°	4498	4554	4481
30°	4236	4426	4372
35°	4002	4242	4249
40°	3808	4013	4118
45°	3590	3770	3963
50°	3360	3553	3795
55°	3099	3305	3590
60°	2791	3016	3338
65°	2465	2682	3037
70°	2054	2284	2580
75°	1614	1824	2019
80°	1155	1283	1424
85°	753	753	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.6	4.1
10°-20°	479.3	11.4
20°-30°	700.4	16.7
30°-40°	795.0	19.0
40°-50°	767.5	18.3
50°-60°	633.1	15.1
60°-70°	421.6	10.1
70°-80°	188.7	4.5
80°-90°	33.7	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°	1350.3	32.2
0°-40°	2145.4	51.2
0°-60°	3546.0	84.6
0°-90°	4190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1812	1812	1812	1812	1812	
5°	1810	1809	1802	1793	1787	171
15°	1706	1710	1706	1698	1686	481
25°	1515	1527	1534	1522	1509	694
35°	1218	1235	1291	1298	1293	763
45°	943	959	991	1036	1041	728
55°	661	672	704	744	765	590
65°	387	398	421	451	477	384
75°	155	164	175	184	194	170
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°	1812.1	1812.1	1812.1	1812.1	1812.1
2.5°	1816.9	1817.6	1813.5	1802.3	1795.4
5°	1810.0	1809.3	1802.3	1792.6	1787.0
7.5°	1789.8	1791.2	1789.1	1775.2	1767.5
10°	1770.3	1771.0	1765.4	1754.3	1745.2
12.5°	1745.2	1744.5	1736.9	1731.3	1716.7
15°	1705.6	1709.7	1705.6	1697.9	1686.1
17.5°	1667.3	1667.3	1670.1	1656.8	1647.8
20°	1624.1	1626.2	1626.2	1615.8	1605.3
22.5°	1574.0	1580.3	1582.3	1571.2	1558.7
25°	1514.8	1526.6	1533.6	1522.5	1509.2
27.5°	1443.1	1461.2	1482.1	1473.7	1459.1
30°	1363.1	1389.5	1424.3	1417.4	1406.9
32.5°	1287.2	1313.6	1361.7	1358.9	1353.3
35°	1218.3	1235.0	1291.3	1298.3	1293.4
37.5°	1152.8	1168.1	1221.0	1237.1	1232.9
40°	1083.9	1100.6	1142.4	1170.9	1172.3
42.5°	1015.7	1031.7	1065.8	1106.9	1106.9
45°	943.3	959.3	990.6	1035.9	1041.4
47.5°	872.3	889.0	919.6	964.9	973.9
50°	802.7	818.0	848.6	892.5	906.4
52.5°	730.3	747.0	776.9	817.3	837.5
55°	660.6	671.8	704.5	743.5	765.1
57.5°	588.2	598.7	635.6	669.0	691.3
60°	518.6	531.9	560.4	594.5	620.3
62.5°	451.8	465.7	490.1	520.0	549.3
65°	387.1	397.5	421.2	451.1	476.9
67.5°	324.4	333.5	357.1	378.0	405.2
70°	261.1	272.9	290.3	310.5	327.9
72.5°	210.2	215.1	229.7	244.3	262.4
75°	155.2	163.6	175.4	183.8	194.2
77.5°	111.4	116.3	123.2	130.2	139.9
80°	74.5	76.6	82.8	84.2	91.9
82.5°	45.2	46.6	48.0	48.7	51.5
85°	24.4	24.4	24.4	23.0	23.0
87.5°	13.9	13.9	11.8	9.7	7.0
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)