

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: P557316

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-86-EDD-90**

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: P557316
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-81-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

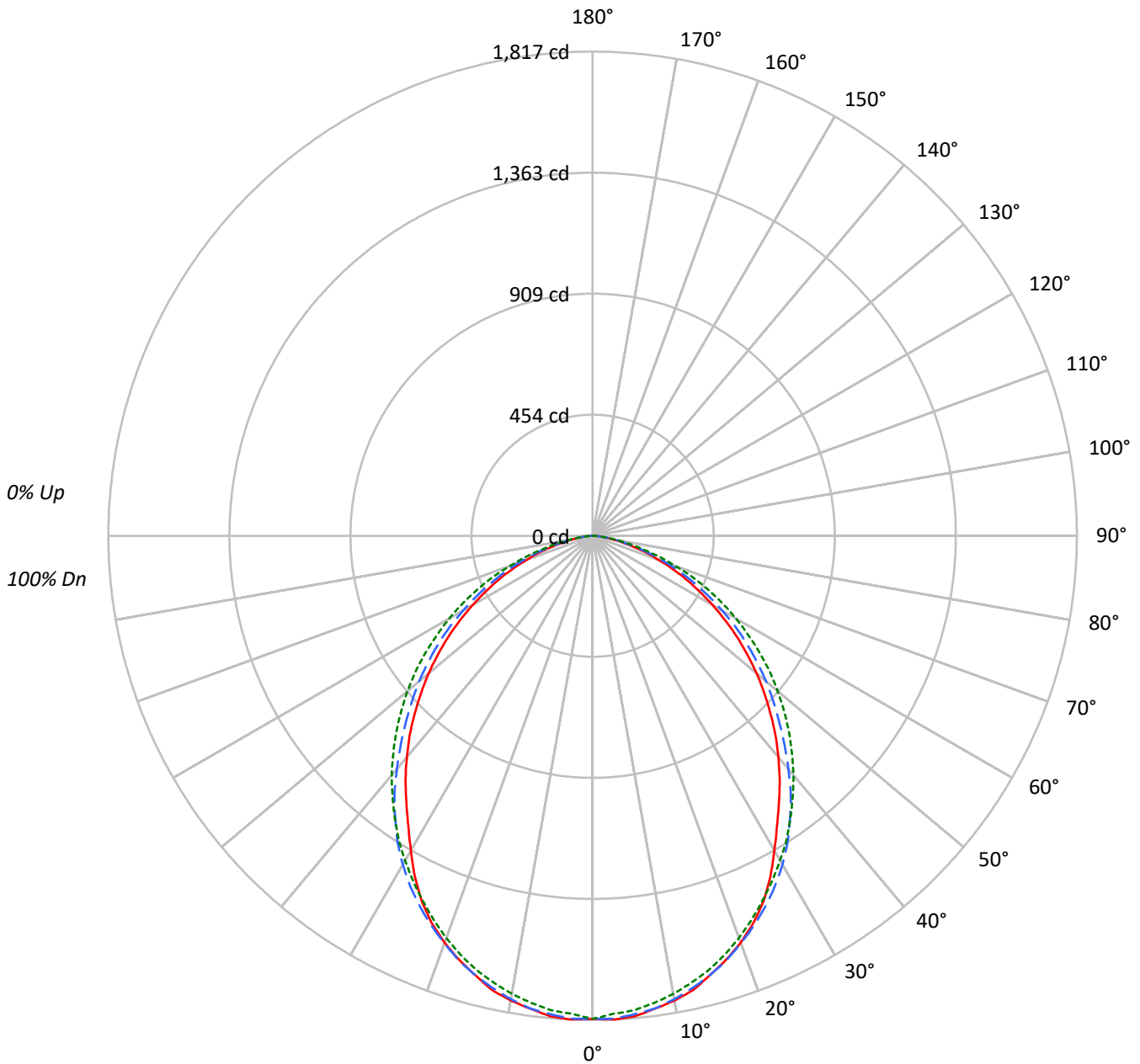
Lumens per Lamp: N/A
Luminaire Lumens: 4191.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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°	4877	4877	4877
5°	4890	4870	4828
10°	4838	4825	4770
15°	4753	4753	4698
20°	4652	4658	4598
25°	4499	4555	4482
30°	4236	4427	4373
35°	4003	4243	4250
40°	3809	4014	4119
45°	3591	3771	3964
50°	3361	3553	3795
55°	3100	3306	3590
60°	2792	3017	3339
65°	2465	2683	3037
70°	2054	2285	2581
75°	1615	1825	2020
80°	1155	1285	1424
85°	753	753	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	4.1
10°-20°	479.4	11.4
20°-30°	700.6	16.7
30°-40°	795.2	19.0
40°-50°	767.7	18.3
50°-60°	633.3	15.1
60°-70°	421.7	10.1
70°-80°	188.7	4.5
80°-90°	33.8	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°	1350.6	32.2
0°-40°	2145.9	51.2
0°-60°	3546.8	84.6
0°-90°	4191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1812	1812	1812	1812	1812	
5°	1810	1810	1803	1793	1787	171
15°	1706	1710	1706	1698	1686	481
25°	1515	1527	1534	1523	1510	694
35°	1218	1235	1292	1299	1294	763
45°	944	960	991	1036	1042	728
55°	661	672	705	744	765	590
65°	387	398	421	451	477	384
75°	155	164	176	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°	1812.5	1812.5	1812.5	1812.5	1812.5
2.5°	1817.4	1818.1	1813.9	1802.8	1795.8
5°	1810.4	1809.7	1802.8	1793.0	1787.4
7.5°	1790.2	1791.6	1789.5	1775.6	1767.9
10°	1770.7	1771.4	1765.8	1754.7	1745.7
12.5°	1745.7	1745.0	1737.3	1731.7	1717.1
15°	1706.0	1710.1	1706.0	1698.3	1686.5
17.5°	1667.7	1667.7	1670.5	1657.2	1648.2
20°	1624.5	1626.6	1626.6	1616.1	1605.7
22.5°	1574.4	1580.6	1582.7	1571.6	1559.0
25°	1515.2	1527.0	1534.0	1522.8	1509.6
27.5°	1443.5	1461.6	1482.4	1474.1	1459.5
30°	1363.4	1389.8	1424.7	1417.7	1407.2
32.5°	1287.5	1313.9	1362.0	1359.2	1353.6
35°	1218.5	1235.3	1291.7	1298.6	1293.7
37.5°	1153.1	1168.4	1221.3	1237.3	1233.2
40°	1084.2	1100.9	1142.6	1171.2	1172.6
42.5°	1015.9	1031.9	1066.1	1107.1	1107.1
45°	943.5	959.5	990.9	1036.1	1041.7
47.5°	872.5	889.2	919.8	965.1	974.1
50°	802.8	818.2	848.8	892.7	906.6
52.5°	730.4	747.1	777.1	817.5	837.7
55°	660.8	671.9	704.7	743.7	765.2
57.5°	588.4	598.8	635.7	669.2	691.4
60°	518.8	532.0	560.5	594.7	620.4
62.5°	451.9	465.8	490.2	520.1	549.4
65°	387.1	397.6	421.3	451.2	477.0
67.5°	324.5	333.5	357.2	378.1	405.3
70°	261.1	273.0	290.4	310.6	328.0
72.5°	210.3	215.2	229.8	244.4	262.5
75°	155.3	163.6	175.5	183.8	194.3
77.5°	111.4	116.3	123.2	130.2	140.0
80°	74.5	76.6	82.9	84.3	91.9
82.5°	45.3	46.7	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)