

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: P557416

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-88-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: P557416
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-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

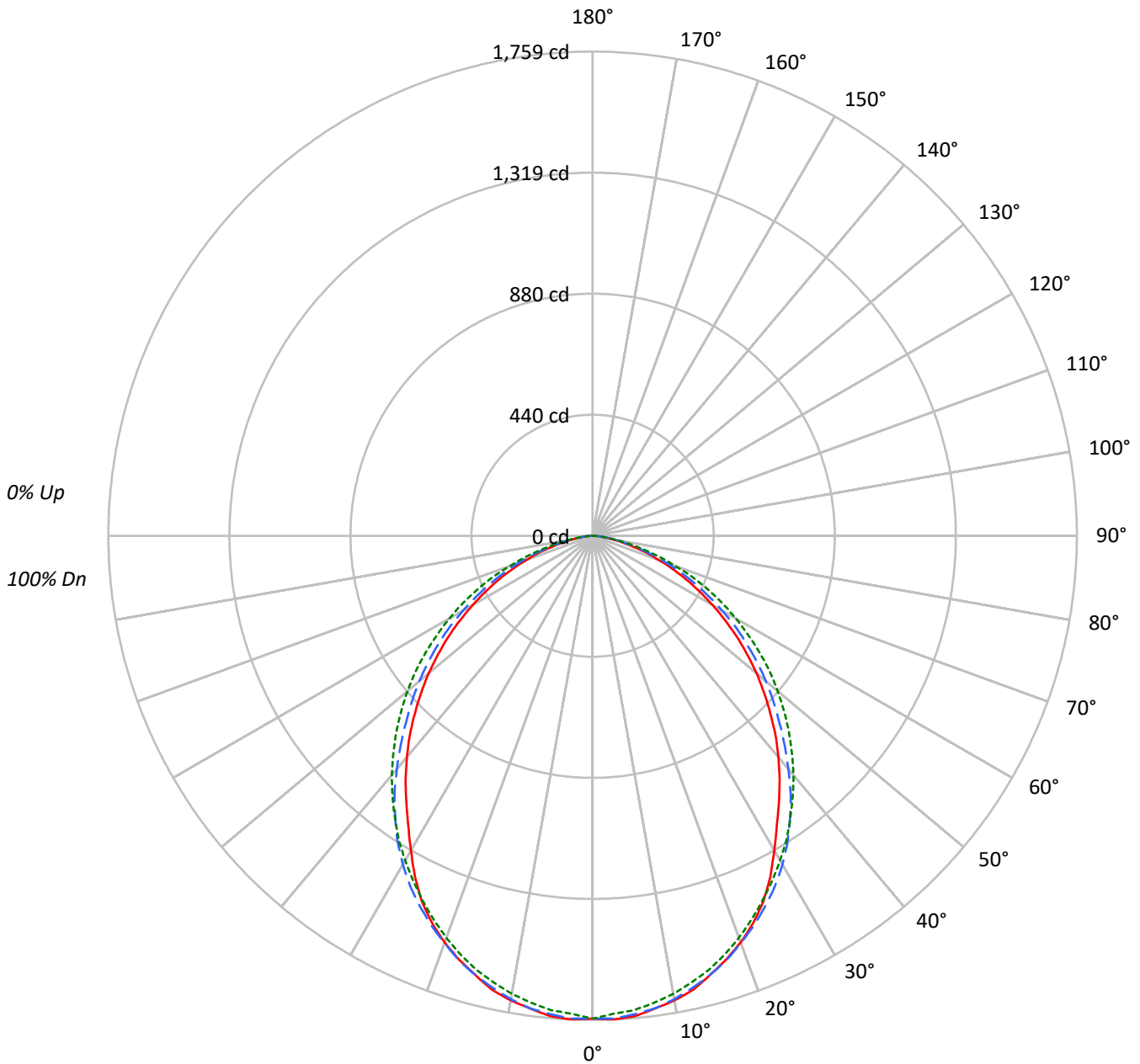
Lumens per Lamp: N/A
Luminaire Lumens: 4056.0 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4720	4720	4720
5°	4733	4713	4673
10°	4683	4670	4616
15°	4600	4600	4547
20°	4502	4508	4450
25°	4354	4408	4338
30°	4100	4284	4232
35°	3874	4107	4113
40°	3686	3884	3986
45°	3475	3649	3836
50°	3253	3439	3673
55°	3000	3200	3475
60°	2702	2920	3231
65°	2386	2596	2939
70°	1988	2211	2497
75°	1563	1765	1955
80°	1117	1243	1379
85°	729	729	685



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	4.1
10°-20°	464.0	11.4
20°-30°	678.0	16.7
30°-40°	769.6	19.0
40°-50°	742.9	18.3
50°-60°	612.9	15.1
60°-70°	408.1	10.1
70°-80°	182.6	4.5
80°-90°	32.7	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°	1307.1	32.2
0°-40°	2076.8	51.2
0°-60°	3432.6	84.6
0°-90°	4056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1754	1754	1754	1754	1754	
5°	1752	1751	1745	1735	1730	166
15°	1651	1655	1651	1644	1632	465
25°	1466	1478	1485	1474	1461	672
35°	1179	1196	1250	1257	1252	739
45°	913	929	959	1003	1008	705
55°	640	650	682	720	741	571
65°	375	385	408	437	462	371
75°	150	158	170	178	188	164
85°	24	24	24	22	22	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1754.1	1754.1	1754.1	1754.1	1754.1
2.5°	1758.8	1759.5	1755.5	1744.7	1737.9
5°	1752.1	1751.4	1744.7	1735.2	1729.9
7.5°	1732.6	1733.9	1731.9	1718.4	1711.0
10°	1713.7	1714.4	1709.0	1698.2	1689.4
12.5°	1689.4	1688.7	1681.3	1675.9	1661.8
15°	1651.0	1655.1	1651.0	1643.6	1632.1
17.5°	1613.9	1613.9	1616.6	1603.8	1595.1
20°	1572.2	1574.2	1574.2	1564.1	1554.0
22.5°	1523.6	1529.7	1531.7	1521.0	1508.8
25°	1466.4	1477.8	1484.6	1473.8	1461.0
27.5°	1397.0	1414.5	1434.7	1426.6	1412.5
30°	1319.5	1345.1	1378.8	1372.0	1361.9
32.5°	1246.0	1271.6	1318.1	1315.4	1310.0
35°	1179.3	1195.5	1250.1	1256.8	1252.1
37.5°	1115.9	1130.8	1182.0	1197.5	1193.4
40°	1049.2	1065.4	1105.8	1133.5	1134.8
42.5°	983.2	998.7	1031.7	1071.5	1071.5
45°	913.1	928.6	958.9	1002.7	1008.1
47.5°	844.4	860.5	890.2	934.0	942.8
50°	777.0	791.8	821.5	863.9	877.4
52.5°	706.9	723.1	752.1	791.1	810.7
55°	639.5	650.3	682.0	719.7	740.6
57.5°	569.4	579.5	615.3	647.6	669.2
60°	502.0	514.8	542.5	575.5	600.4
62.5°	437.3	450.8	474.4	503.4	531.7
65°	374.7	384.8	407.7	436.7	461.6
67.5°	314.0	322.8	345.7	365.9	392.2
70°	252.7	264.2	281.0	300.6	317.4
72.5°	203.5	208.2	222.4	236.5	254.1
75°	150.3	158.4	169.8	177.9	188.0
77.5°	107.8	112.5	119.3	126.0	135.5
80°	72.1	74.1	80.2	81.5	89.0
82.5°	43.8	45.2	46.5	47.2	49.9
85°	23.6	23.6	23.6	22.2	22.2
87.5°	13.5	13.5	11.5	9.4	6.7
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)