

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: P557390

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-81-97-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: P557390
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-81-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

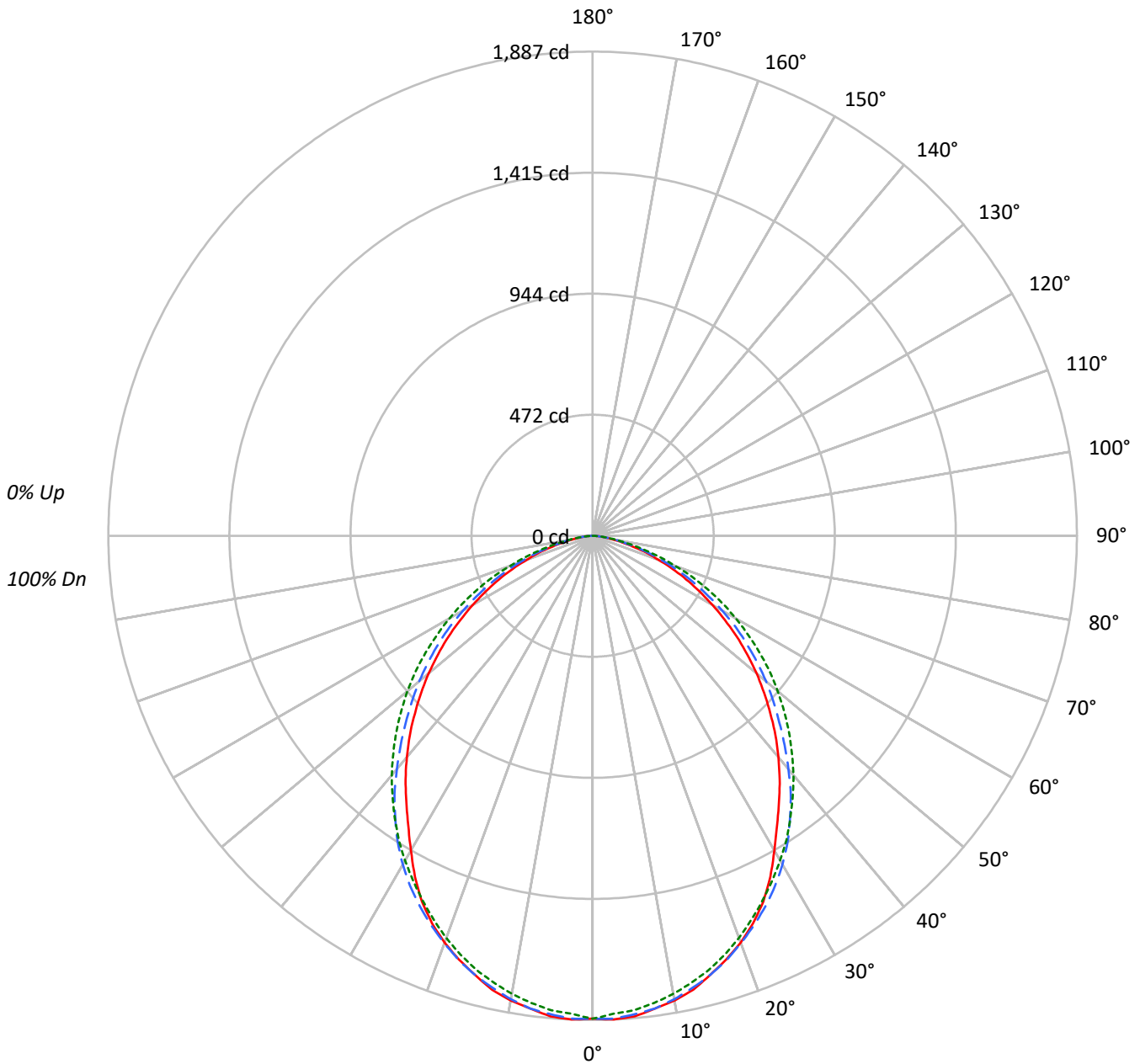
Lumens per Lamp: N/A
Luminaire Lumens: 4352.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5065	5065	5065
5°	5078	5057	5014
10°	5024	5011	4953
15°	4935	4935	4879
20°	4831	4837	4775
25°	4672	4730	4654
30°	4399	4597	4541
35°	4157	4406	4413
40°	3955	4168	4277
45°	3728	3916	4117
50°	3490	3690	3941
55°	3219	3433	3728
60°	2899	3133	3467
65°	2560	2786	3154
70°	2133	2372	2680
75°	1676	1894	2097
80°	1199	1333	1478
85°	781	781	738



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.2	4.1
10°-20°	497.8	11.4
20°-30°	727.5	16.7
30°-40°	825.8	19.0
40°-50°	797.2	18.3
50°-60°	657.6	15.1
60°-70°	437.9	10.1
70°-80°	196.0	4.5
80°-90°	35.1	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°	1402.5	32.2
0°-40°	2228.3	51.2
0°-60°	3683.1	84.6
0°-90°	4352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1882	1882	1882	1882	1882	
5°	1880	1879	1872	1862	1856	178
15°	1772	1776	1772	1764	1751	499
25°	1573	1586	1593	1581	1568	721
35°	1265	1283	1341	1348	1343	793
45°	980	996	1029	1076	1082	756
55°	686	698	732	772	795	612
65°	402	413	438	468	495	399
75°	161	170	182	191	202	176
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1882.1	1882.1	1882.1	1882.1	1882.1
2.5°	1887.2	1887.9	1883.6	1872.0	1864.8
5°	1880.0	1879.2	1872.0	1861.9	1856.1
7.5°	1859.0	1860.4	1858.3	1843.8	1835.9
10°	1838.7	1839.5	1833.7	1822.1	1812.7
12.5°	1812.7	1812.0	1804.0	1798.3	1783.1
15°	1771.5	1775.8	1771.5	1763.5	1751.3
17.5°	1731.7	1731.7	1734.6	1720.9	1711.5
20°	1686.9	1689.1	1689.1	1678.2	1667.4
22.5°	1634.8	1641.3	1643.5	1631.9	1618.9
25°	1573.4	1585.7	1592.9	1581.3	1567.6
27.5°	1498.9	1517.7	1539.4	1530.7	1515.5
30°	1415.8	1443.2	1479.4	1472.2	1461.3
32.5°	1336.9	1364.4	1414.3	1411.4	1405.6
35°	1265.4	1282.7	1341.3	1348.5	1343.4
37.5°	1197.4	1213.3	1268.2	1284.9	1280.5
40°	1125.8	1143.2	1186.5	1216.2	1217.6
42.5°	1054.9	1071.6	1107.0	1149.7	1149.7
45°	979.7	996.4	1028.9	1075.9	1081.7
47.5°	906.0	923.3	955.2	1002.2	1011.6
50°	833.7	849.6	881.4	927.0	941.4
52.5°	758.5	775.8	806.9	848.9	869.8
55°	686.2	697.8	731.7	772.2	794.6
57.5°	611.0	621.8	660.2	694.9	718.0
60°	538.7	552.4	582.1	617.5	644.2
62.5°	469.3	483.7	509.0	540.1	570.5
65°	402.0	412.9	437.5	468.5	495.3
67.5°	336.9	346.3	370.9	392.6	420.8
70°	271.1	283.4	301.5	322.5	340.6
72.5°	218.4	223.4	238.6	253.8	272.6
75°	161.2	169.9	182.2	190.9	201.7
77.5°	115.7	120.8	128.0	135.2	145.3
80°	77.4	79.5	86.0	87.5	95.4
82.5°	47.0	48.4	49.9	50.6	53.5
85°	25.3	25.3	25.3	23.9	23.9
87.5°	14.5	14.5	12.3	10.1	7.2
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)