

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: P556393

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-88-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: P556393
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-50-UNV-93-88-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

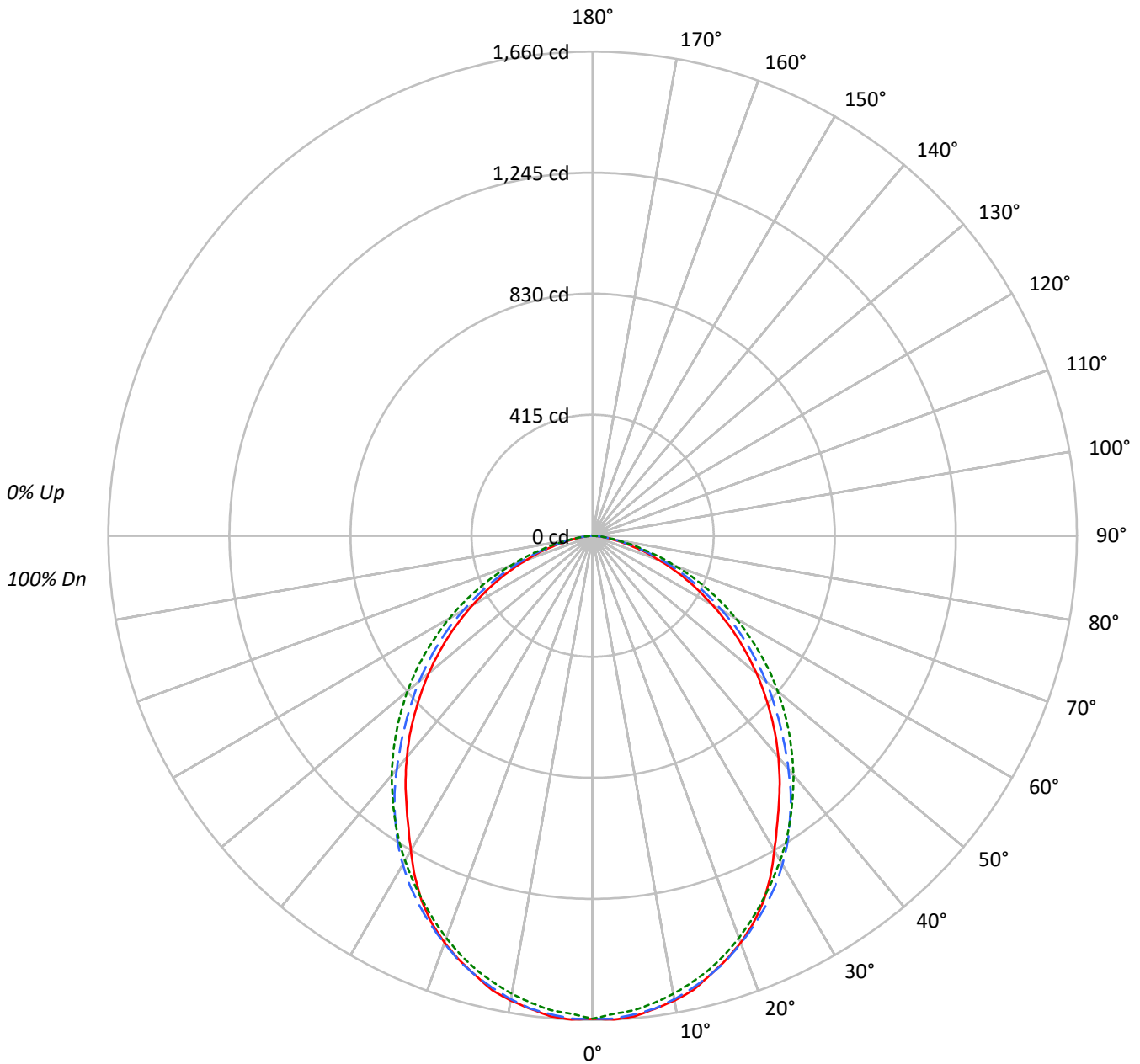
Lumens per Lamp: N/A
Luminaire Lumens: 3829.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4456	4456	4456
5°	4468	4449	4411
10°	4421	4408	4358
15°	4342	4342	4293
20°	4250	4256	4201
25°	4110	4161	4095
30°	3870	4044	3995
35°	3657	3877	3883
40°	3479	3667	3763
45°	3280	3445	3622
50°	3071	3247	3468
55°	2832	3020	3280
60°	2551	2756	3050
65°	2252	2451	2775
70°	1877	2087	2357
75°	1475	1667	1845
80°	1055	1173	1302
85°	689	689	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.9	4.1
10°-20°	438.0	11.4
20°-30°	640.1	16.7
30°-40°	726.5	19.0
40°-50°	701.4	18.3
50°-60°	578.6	15.1
60°-70°	385.3	10.1
70°-80°	172.4	4.5
80°-90°	30.8	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°	1234.0	32.2
0°-40°	1960.5	51.2
0°-60°	3240.5	84.6
0°-90°	3829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1654	1653	1647	1638	1633	157
15°	1559	1562	1559	1552	1541	439
25°	1384	1395	1402	1391	1379	634
35°	1113	1129	1180	1186	1182	698
45°	862	877	905	947	952	665
55°	604	614	644	679	699	539
65°	354	363	385	412	436	351
75°	142	150	160	168	178	155
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1655.9	1655.9	1655.9	1655.9	1655.9
2.5°	1660.4	1661.0	1657.2	1647.0	1640.7
5°	1654.0	1653.4	1647.0	1638.1	1633.0
7.5°	1635.6	1636.9	1635.0	1622.2	1615.2
10°	1617.8	1618.4	1613.3	1603.1	1594.9
12.5°	1594.9	1594.2	1587.2	1582.1	1568.8
15°	1558.6	1562.4	1558.6	1551.6	1540.8
17.5°	1523.6	1523.6	1526.2	1514.1	1505.8
20°	1484.2	1486.1	1486.1	1476.5	1467.0
22.5°	1438.4	1444.1	1446.0	1435.8	1424.4
25°	1384.3	1395.1	1401.5	1391.3	1379.2
27.5°	1318.8	1335.3	1354.4	1346.8	1333.4
30°	1245.6	1269.8	1301.6	1295.2	1285.7
32.5°	1176.3	1200.4	1244.3	1241.8	1236.7
35°	1113.3	1128.6	1180.1	1186.5	1182.0
37.5°	1053.5	1067.5	1115.8	1130.5	1126.7
40°	990.5	1005.8	1044.0	1070.0	1071.3
42.5°	928.2	942.8	974.0	1011.5	1011.5
45°	862.0	876.6	905.3	946.6	951.7
47.5°	797.1	812.4	840.4	881.7	890.0
50°	733.5	747.5	775.5	815.6	828.3
52.5°	667.3	682.6	710.0	746.9	765.3
55°	603.7	613.9	643.8	679.4	699.1
57.5°	537.6	547.1	580.8	611.4	631.7
60°	473.9	486.0	512.1	543.3	566.8
62.5°	412.9	425.6	447.9	475.2	501.9
65°	353.7	363.3	384.9	412.2	435.8
67.5°	296.5	304.7	326.4	345.4	370.2
70°	238.6	249.4	265.3	283.7	299.6
72.5°	192.1	196.6	209.9	223.3	239.8
75°	141.9	149.5	160.3	167.9	177.5
77.5°	101.8	106.2	112.6	119.0	127.9
80°	68.1	70.0	75.7	77.0	84.0
82.5°	41.4	42.6	43.9	44.5	47.1
85°	22.3	22.3	22.3	21.0	21.0
87.5°	12.7	12.7	10.8	8.9	6.4
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)