

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: P556165

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-86-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: P556165
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-30-UNV-81-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

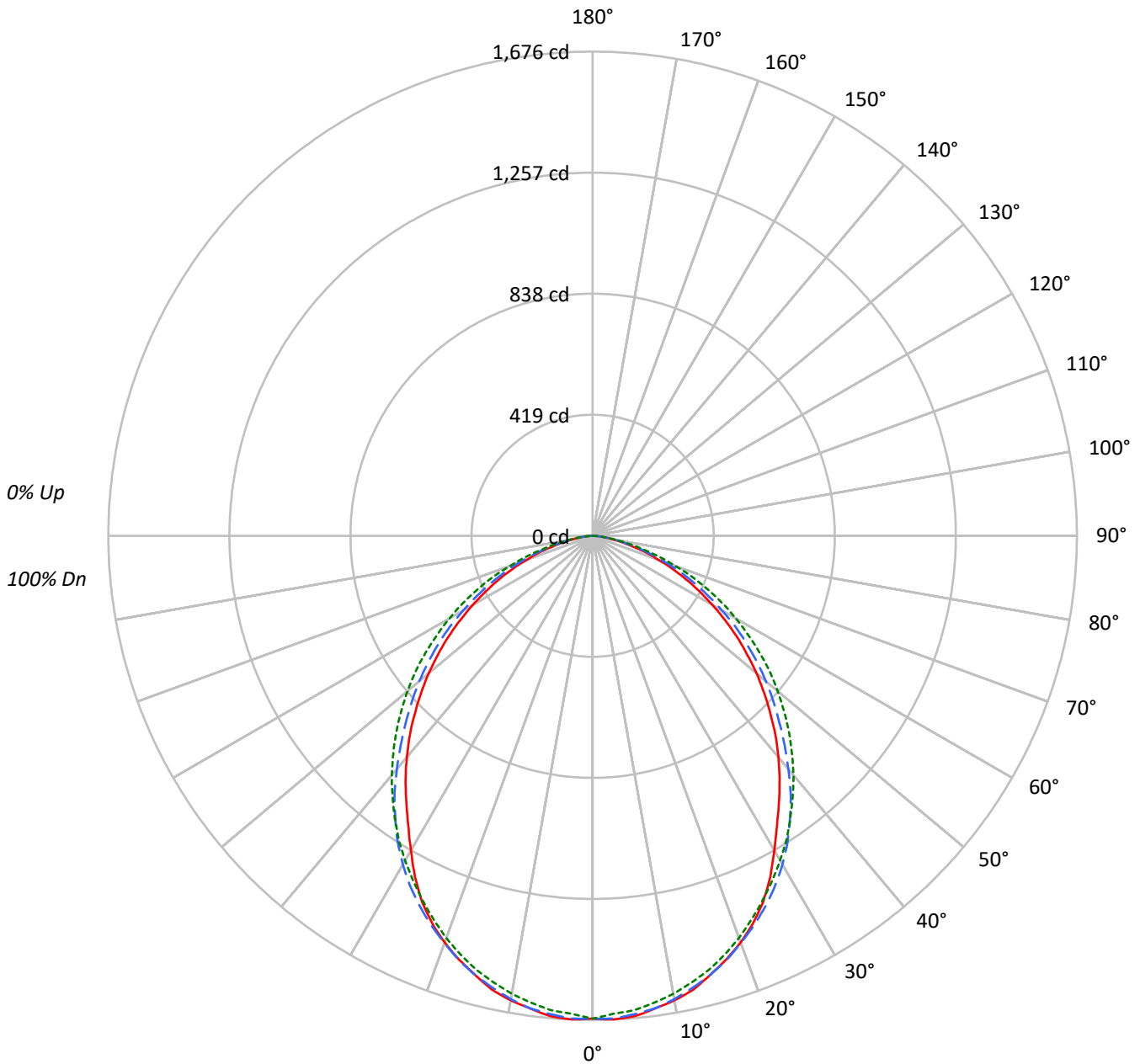
Lumens per Lamp: N/A
Luminaire Lumens: 3865.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4498	4498	4498
5°	4510	4491	4453
10°	4462	4450	4399
15°	4383	4383	4333
20°	4290	4296	4241
25°	4149	4200	4134
30°	3907	4082	4033
35°	3692	3913	3919
40°	3512	3702	3799
45°	3311	3478	3656
50°	3100	3277	3500
55°	2859	3049	3311
60°	2575	2782	3080
65°	2273	2474	2801
70°	1895	2107	2380
75°	1489	1682	1863
80°	1065	1184	1314
85°	695	695	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.4	4.1
10°-20°	442.1	11.4
20°-30°	646.1	16.7
30°-40°	733.4	19.0
40°-50°	708.0	18.3
50°-60°	584.0	15.1
60°-70°	388.9	10.1
70°-80°	174.0	4.5
80°-90°	31.1	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°	1245.6	32.2
0°-40°	1978.9	51.2
0°-60°	3270.9	84.6
0°-90°	3865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1672	1672	1672	1672	1672	
5°	1670	1669	1662	1654	1648	158
15°	1573	1577	1573	1566	1555	444
25°	1397	1408	1415	1404	1392	640
35°	1124	1139	1191	1198	1193	704
45°	870	885	914	956	961	671
55°	609	620	650	686	706	544
65°	357	367	388	416	440	354
75°	143	151	162	170	179	157
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°	1671.5	1671.5	1671.5	1671.5	1671.5
2.5°	1676.0	1676.6	1672.8	1662.5	1656.1
5°	1669.6	1668.9	1662.5	1653.5	1648.4
7.5°	1651.0	1652.2	1650.3	1637.5	1630.4
10°	1633.0	1633.6	1628.5	1618.2	1609.9
12.5°	1609.9	1609.2	1602.2	1597.0	1583.5
15°	1573.3	1577.1	1573.3	1566.2	1555.3
17.5°	1537.9	1537.9	1540.5	1528.3	1520.0
20°	1498.1	1500.1	1500.1	1490.4	1480.8
22.5°	1451.9	1457.7	1459.6	1449.3	1437.8
25°	1397.3	1408.2	1414.7	1404.4	1392.2
27.5°	1331.2	1347.9	1367.1	1359.4	1345.9
30°	1257.3	1281.7	1313.8	1307.4	1297.8
32.5°	1187.3	1211.7	1256.0	1253.5	1248.3
35°	1123.8	1139.2	1191.2	1197.6	1193.1
37.5°	1063.4	1077.5	1126.3	1141.1	1137.2
40°	999.8	1015.2	1053.8	1080.1	1081.4
42.5°	936.9	951.7	983.1	1021.0	1021.0
45°	870.1	884.9	913.8	955.5	960.7
47.5°	804.6	820.0	848.3	890.0	898.4
50°	740.4	754.5	782.8	823.2	836.1
52.5°	673.6	689.0	716.6	753.9	772.5
55°	609.4	619.7	649.9	685.8	705.7
57.5°	542.6	552.2	586.3	617.1	637.7
60°	478.4	490.6	516.9	548.4	572.2
62.5°	416.8	429.6	452.1	479.7	506.7
65°	357.0	366.7	388.5	416.1	439.9
67.5°	299.2	307.6	329.4	348.7	373.7
70°	240.8	251.7	267.8	286.4	302.5
72.5°	193.9	198.4	211.9	225.4	242.1
75°	143.2	150.9	161.8	169.5	179.2
77.5°	102.7	107.2	113.7	120.1	129.1
80°	68.7	70.6	76.4	77.7	84.8
82.5°	41.7	43.0	44.3	45.0	47.5
85°	22.5	22.5	22.5	21.2	21.2
87.5°	12.8	12.8	10.9	9.0	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)