

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: P556899

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-85-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: P556899
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-LD4-1STD-50-UNV-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

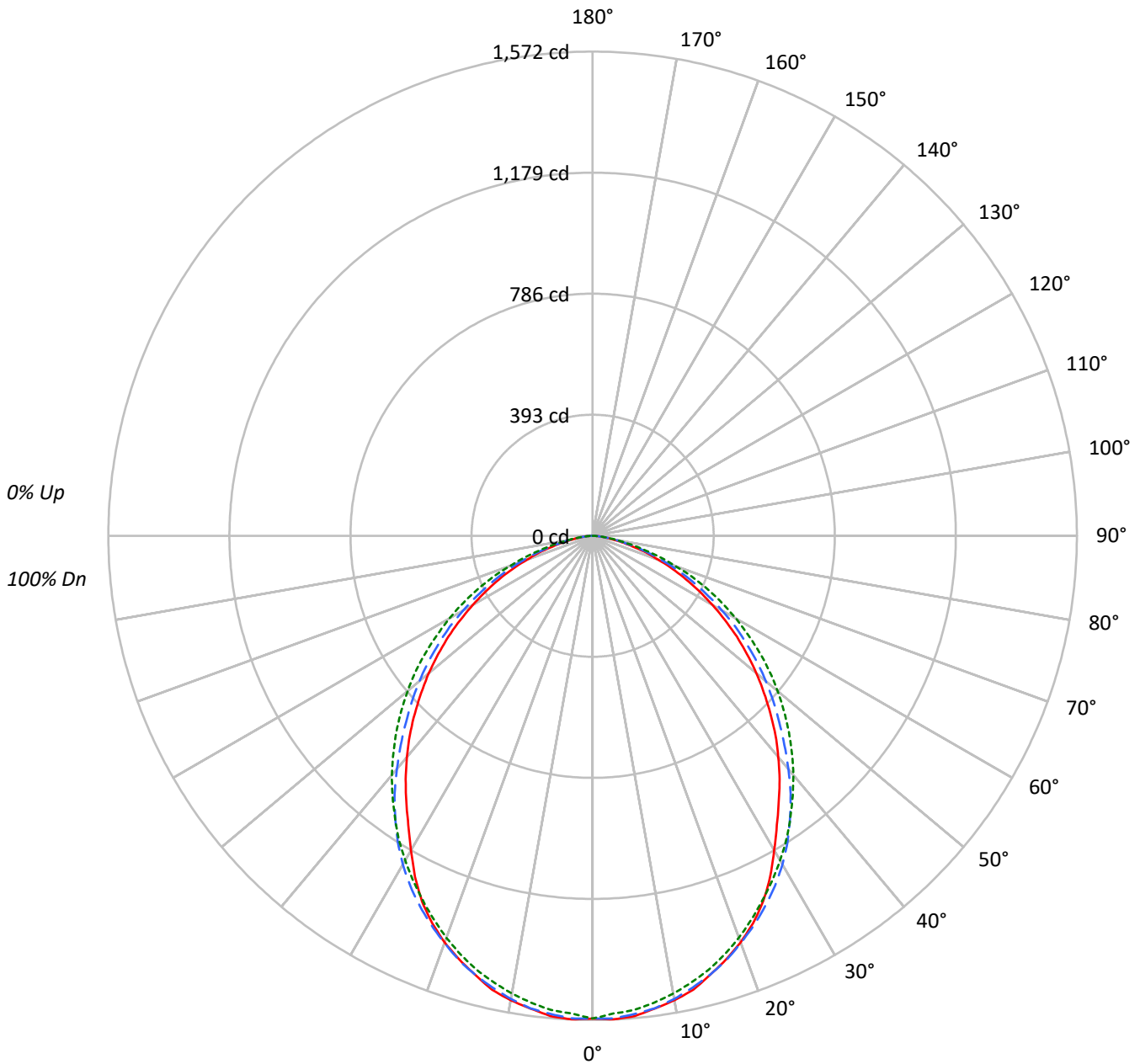
Lumens per Lamp: N/A
Luminaire Lumens: 3624.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	4218	4218	4218
5°	4229	4211	4175
10°	4184	4172	4125
15°	4110	4110	4063
20°	4023	4028	3976
25°	3890	3938	3876
30°	3663	3828	3781
35°	3461	3669	3675
40°	3293	3471	3562
45°	3105	3261	3428
50°	2906	3073	3282
55°	2681	2859	3104
60°	2414	2609	2887
65°	2132	2320	2626
70°	1777	1976	2231
75°	1396	1577	1747
80°	998	1111	1232
85°	651	651	614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.6	4.1
10°-20°	414.6	11.4
20°-30°	605.8	16.7
30°-40°	687.6	19.0
40°-50°	663.8	18.3
50°-60°	547.6	15.1
60°-70°	364.7	10.1
70°-80°	163.2	4.5
80°-90°	29.2	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°	1167.9	32.2
0°-40°	1855.5	51.2
0°-60°	3067.0	84.6
0°-90°	3624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1567	1567	1567	1567	1567	
5°	1566	1565	1559	1550	1546	148
15°	1475	1479	1475	1468	1458	416
25°	1310	1320	1326	1317	1305	600
35°	1054	1068	1117	1123	1119	660
45°	816	830	857	896	901	629
55°	571	581	609	643	662	510
65°	335	344	364	390	412	332
75°	134	142	152	159	168	147
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1567.3	1567.3	1567.3	1567.3	1567.3
2.5°	1571.5	1572.1	1568.5	1558.9	1552.8
5°	1565.5	1564.9	1558.9	1550.4	1545.6
7.5°	1548.0	1549.2	1547.4	1535.4	1528.8
10°	1531.2	1531.8	1526.9	1517.3	1509.5
12.5°	1509.5	1508.9	1502.3	1497.4	1484.8
15°	1475.2	1478.8	1475.2	1468.5	1458.3
17.5°	1442.0	1442.0	1444.5	1433.0	1425.2
20°	1404.7	1406.5	1406.5	1397.5	1388.5
22.5°	1361.4	1366.8	1368.6	1359.0	1348.1
25°	1310.2	1320.4	1326.4	1316.8	1305.4
27.5°	1248.2	1263.8	1281.9	1274.7	1262.0
30°	1178.9	1201.8	1231.9	1225.9	1216.9
32.5°	1113.3	1136.2	1177.7	1175.3	1170.5
35°	1053.7	1068.1	1116.9	1122.9	1118.7
37.5°	997.1	1010.3	1056.1	1069.9	1066.3
40°	937.5	951.9	988.1	1012.7	1013.9
42.5°	878.5	892.3	921.8	957.4	957.4
45°	815.9	829.7	856.8	895.9	900.8
47.5°	754.4	768.9	795.4	834.5	842.3
50°	694.2	707.5	734.0	771.9	783.9
52.5°	631.6	646.1	672.0	706.9	724.3
55°	571.4	581.0	609.3	643.1	661.7
57.5°	508.8	517.8	549.7	578.6	597.9
60°	448.6	460.0	484.7	514.2	536.5
62.5°	390.8	402.8	423.9	449.8	475.1
65°	334.8	343.8	364.3	390.2	412.4
67.5°	280.6	288.4	308.9	326.9	350.4
70°	225.8	236.0	251.1	268.5	283.6
72.5°	181.8	186.1	198.7	211.3	227.0
75°	134.3	141.5	151.7	159.0	168.0
77.5°	96.3	100.6	106.6	112.6	121.0
80°	64.4	66.2	71.7	72.9	79.5
82.5°	39.1	40.3	41.5	42.1	44.6
85°	21.1	21.1	21.1	19.9	19.9
87.5°	12.0	12.0	10.2	8.4	6.0
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)