

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: P556173

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-96-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: P556173
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-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

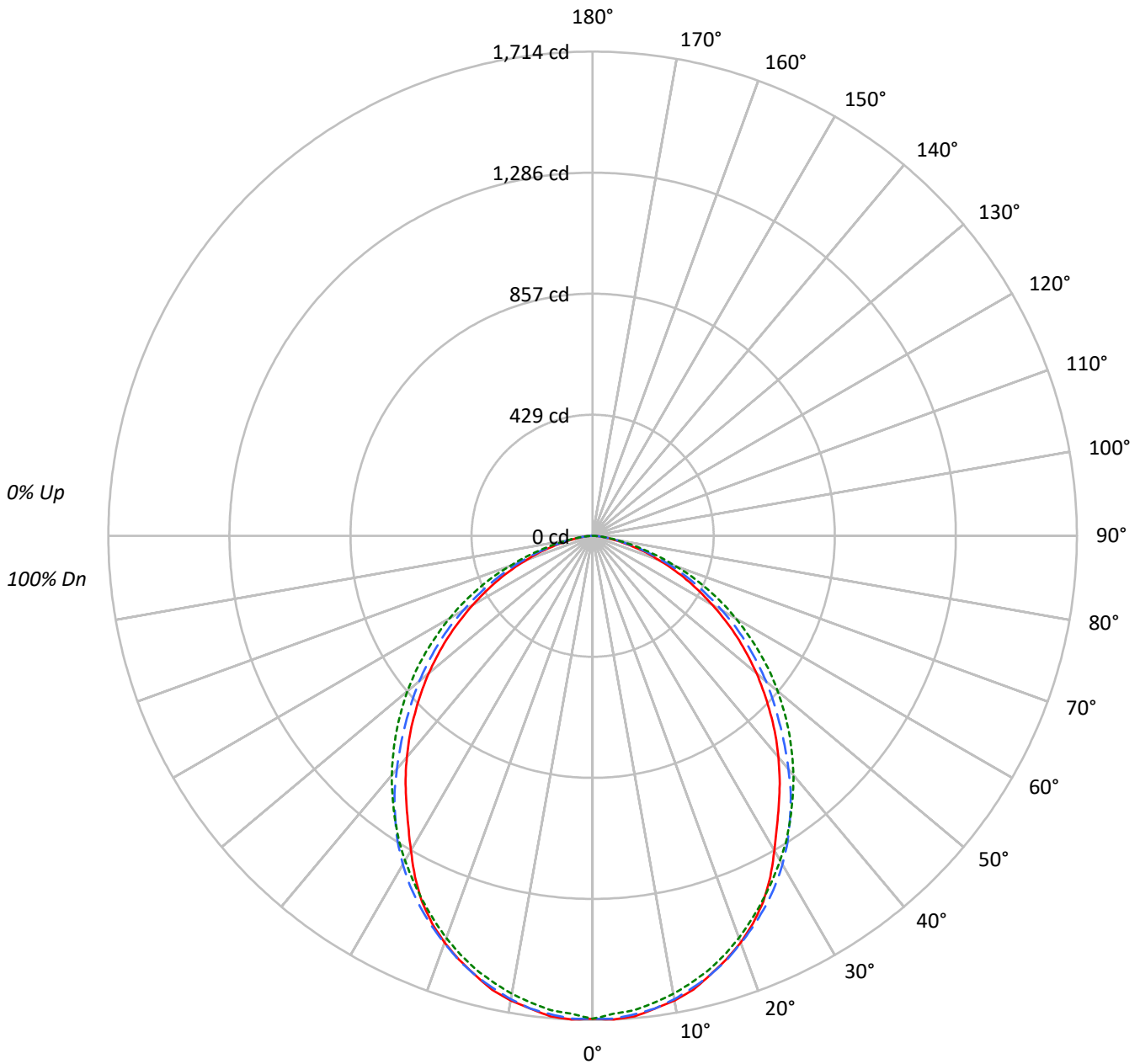
Lumens per Lamp: N/A
Luminaire Lumens: 3953.0 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4600	4600	4600
5°	4613	4593	4554
10°	4564	4551	4499
15°	4483	4483	4432
20°	4388	4393	4337
25°	4243	4296	4228
30°	3996	4175	4124
35°	3776	4002	4009
40°	3592	3786	3885
45°	3387	3557	3739
50°	3170	3352	3580
55°	2924	3118	3386
60°	2633	2845	3150
65°	2325	2530	2865
70°	1938	2155	2434
75°	1523	1721	1905
80°	1089	1212	1344
85°	710	710	670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.0	4.1
10°-20°	452.2	11.4
20°-30°	660.8	16.7
30°-40°	750.1	19.0
40°-50°	724.1	18.3
50°-60°	597.3	15.1
60°-70°	397.8	10.1
70°-80°	178.0	4.5
80°-90°	31.9	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°	1273.9	32.2
0°-40°	2024.0	51.2
0°-60°	3345.4	84.6
0°-90°	3953.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3953.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1710	1710	1710	1710	1710	
5°	1708	1707	1700	1691	1686	162
15°	1609	1613	1609	1602	1591	454
25°	1429	1440	1447	1436	1424	654
35°	1149	1165	1218	1225	1220	720
45°	890	905	935	977	982	687
55°	623	634	665	701	722	556
65°	365	375	397	426	450	362
75°	146	154	166	173	183	160
85°	23	23	23	22	22	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1709.6	1709.6	1709.6	1709.6	1709.6
2.5°	1714.2	1714.8	1710.9	1700.4	1693.8
5°	1707.6	1706.9	1700.4	1691.2	1685.9
7.5°	1688.6	1689.9	1687.9	1674.8	1667.5
10°	1670.2	1670.8	1665.6	1655.1	1646.5
12.5°	1646.5	1645.9	1638.6	1633.4	1619.6
15°	1609.1	1613.0	1609.1	1601.9	1590.7
17.5°	1573.0	1573.0	1575.6	1563.1	1554.6
20°	1532.2	1534.2	1534.2	1524.4	1514.5
22.5°	1485.0	1490.9	1492.8	1482.3	1470.5
25°	1429.1	1440.3	1446.9	1436.4	1423.9
27.5°	1361.5	1378.6	1398.3	1390.4	1376.6
30°	1286.0	1310.9	1343.7	1337.2	1327.3
32.5°	1214.4	1239.3	1284.6	1282.0	1276.8
35°	1149.3	1165.1	1218.3	1224.9	1220.3
37.5°	1087.6	1102.1	1152.0	1167.1	1163.1
40°	1022.6	1038.4	1077.8	1104.7	1106.0
42.5°	958.2	973.3	1005.5	1044.3	1044.3
45°	889.9	905.0	934.6	977.3	982.5
47.5°	822.9	838.7	867.6	910.3	918.8
50°	757.3	771.7	800.6	842.0	855.1
52.5°	689.0	704.7	733.0	771.0	790.1
55°	623.3	633.8	664.7	701.4	721.8
57.5°	555.0	564.8	599.6	631.2	652.2
60°	489.3	501.8	528.7	560.9	585.2
62.5°	426.2	439.4	462.4	490.6	518.2
65°	365.2	375.0	397.3	425.6	449.9
67.5°	306.1	314.6	336.9	356.6	382.2
70°	246.3	257.5	273.9	292.9	309.3
72.5°	198.3	202.9	216.7	230.5	247.6
75°	146.5	154.3	165.5	173.4	183.2
77.5°	105.1	109.7	116.2	122.8	132.0
80°	70.3	72.2	78.2	79.5	86.7
82.5°	42.7	44.0	45.3	46.0	48.6
85°	23.0	23.0	23.0	21.7	21.7
87.5°	13.1	13.1	11.2	9.2	6.6
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)