

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: P556835

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-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: P556835  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

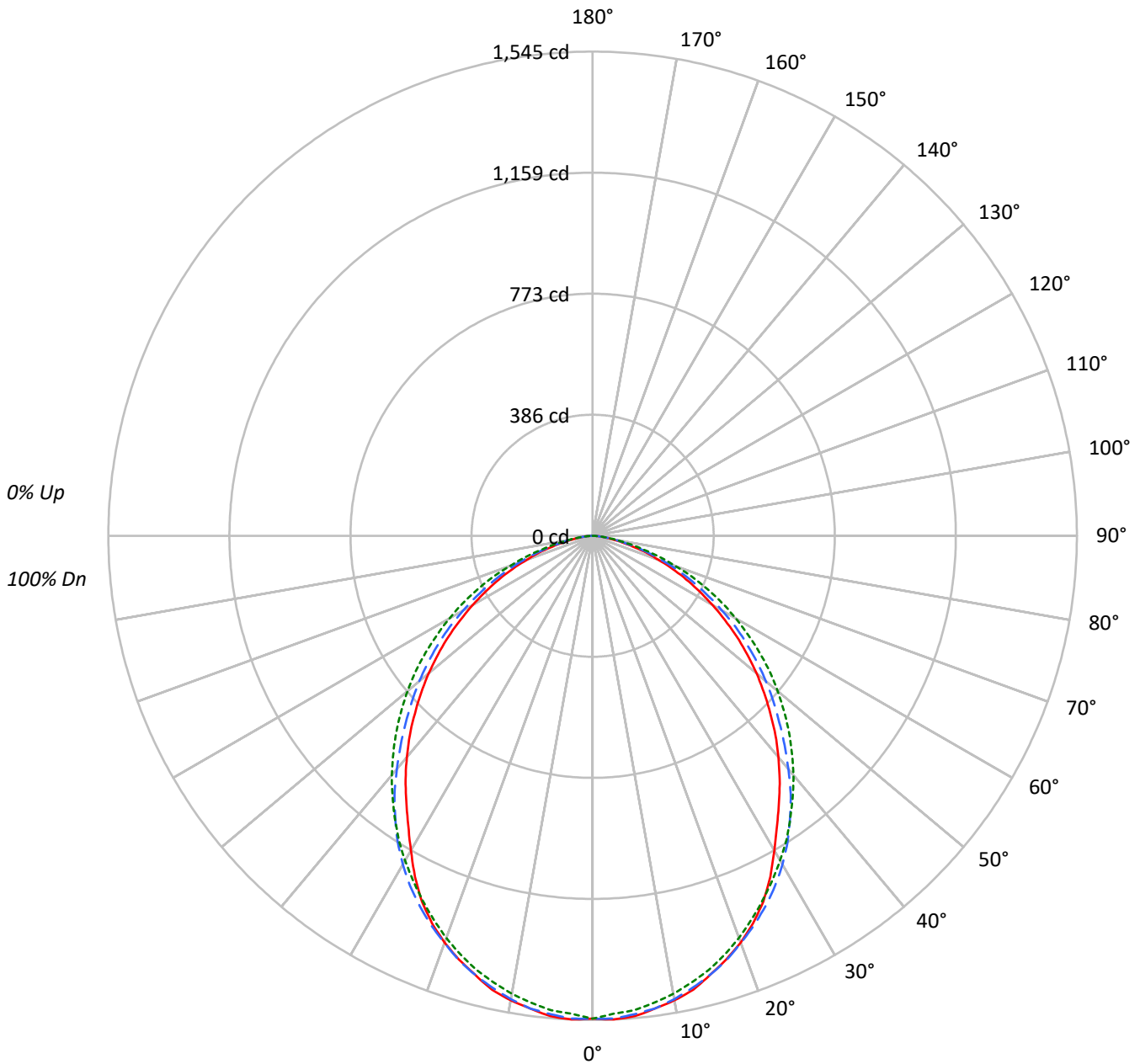
Lumens per Lamp: N/A  
Luminaire Lumens: 3563.0 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	4147	4147	4147
5°	4158	4140	4105
10°	4113	4102	4055
15°	4040	4040	3994
20°	3955	3960	3909
25°	3825	3872	3811
30°	3602	3764	3718
35°	3403	3607	3613
40°	3238	3412	3502
45°	3052	3206	3370
50°	2857	3021	3226
55°	2636	2811	3052
60°	2373	2565	2838
65°	2096	2280	2582
70°	1747	1943	2194
75°	1372	1551	1718
80°	981	1091	1210
85°	639	639	602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.1	4.1
10°-20°	407.6	11.4
20°-30°	595.6	16.7
30°-40°	676.1	19.0
40°-50°	652.6	18.3
50°-60°	538.4	15.1
60°-70°	358.5	10.1
70°-80°	160.4	4.5
80°-90°	28.7	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°	1148.3	32.2
0°-40°	1824.3	51.2
0°-60°	3015.3	84.6
0°-90°	3563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3563.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1539	1538	1533	1524	1520	146
15°	1450	1454	1450	1444	1434	409
25°	1288	1298	1304	1295	1283	590
35°	1036	1050	1098	1104	1100	649
45°	802	816	842	881	886	619
55°	562	571	599	632	651	501
65°	329	338	358	384	406	326
75°	132	139	149	156	165	144
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°	1540.9	1540.9	1540.9	1540.9	1540.9
2.5°	1545.0	1545.6	1542.1	1532.6	1526.7
5°	1539.1	1538.5	1532.6	1524.3	1519.6
7.5°	1522.0	1523.1	1521.4	1509.5	1503.0
10°	1505.4	1506.0	1501.2	1491.8	1484.1
12.5°	1484.1	1483.5	1477.0	1472.2	1459.8
15°	1450.3	1453.9	1450.3	1443.8	1433.8
17.5°	1417.8	1417.8	1420.1	1408.9	1401.2
20°	1381.1	1382.8	1382.8	1374.0	1365.1
22.5°	1338.5	1343.8	1345.6	1336.1	1325.4
25°	1288.1	1298.2	1304.1	1294.6	1283.4
27.5°	1227.2	1242.6	1260.3	1253.2	1240.8
30°	1159.1	1181.6	1211.2	1205.3	1196.4
32.5°	1094.6	1117.1	1157.9	1155.5	1150.8
35°	1036.0	1050.2	1098.1	1104.0	1099.9
37.5°	980.3	993.3	1038.3	1051.9	1048.4
40°	921.7	935.9	971.4	995.7	996.9
42.5°	863.7	877.3	906.3	941.2	941.2
45°	802.1	815.7	842.4	880.9	885.6
47.5°	741.7	755.9	782.0	820.5	828.2
50°	682.5	695.6	721.6	758.9	770.7
52.5°	621.0	635.2	660.6	695.0	712.1
55°	561.8	571.3	599.1	632.2	650.6
57.5°	500.2	509.1	540.5	568.9	587.8
60°	441.0	452.3	476.5	505.5	527.4
62.5°	384.2	396.0	416.7	442.2	467.1
65°	329.1	338.0	358.1	383.6	405.5
67.5°	275.9	283.6	303.7	321.4	344.5
70°	222.0	232.1	246.9	264.0	278.8
72.5°	178.8	182.9	195.4	207.8	223.2
75°	132.0	139.1	149.2	156.3	165.2
77.5°	94.7	98.9	104.8	110.7	119.0
80°	63.3	65.1	70.4	71.6	78.1
82.5°	38.5	39.7	40.8	41.4	43.8
85°	20.7	20.7	20.7	19.5	19.5
87.5°	11.8	11.8	10.1	8.3	5.9
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)