

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: P556207

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-97-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: P556207  
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-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

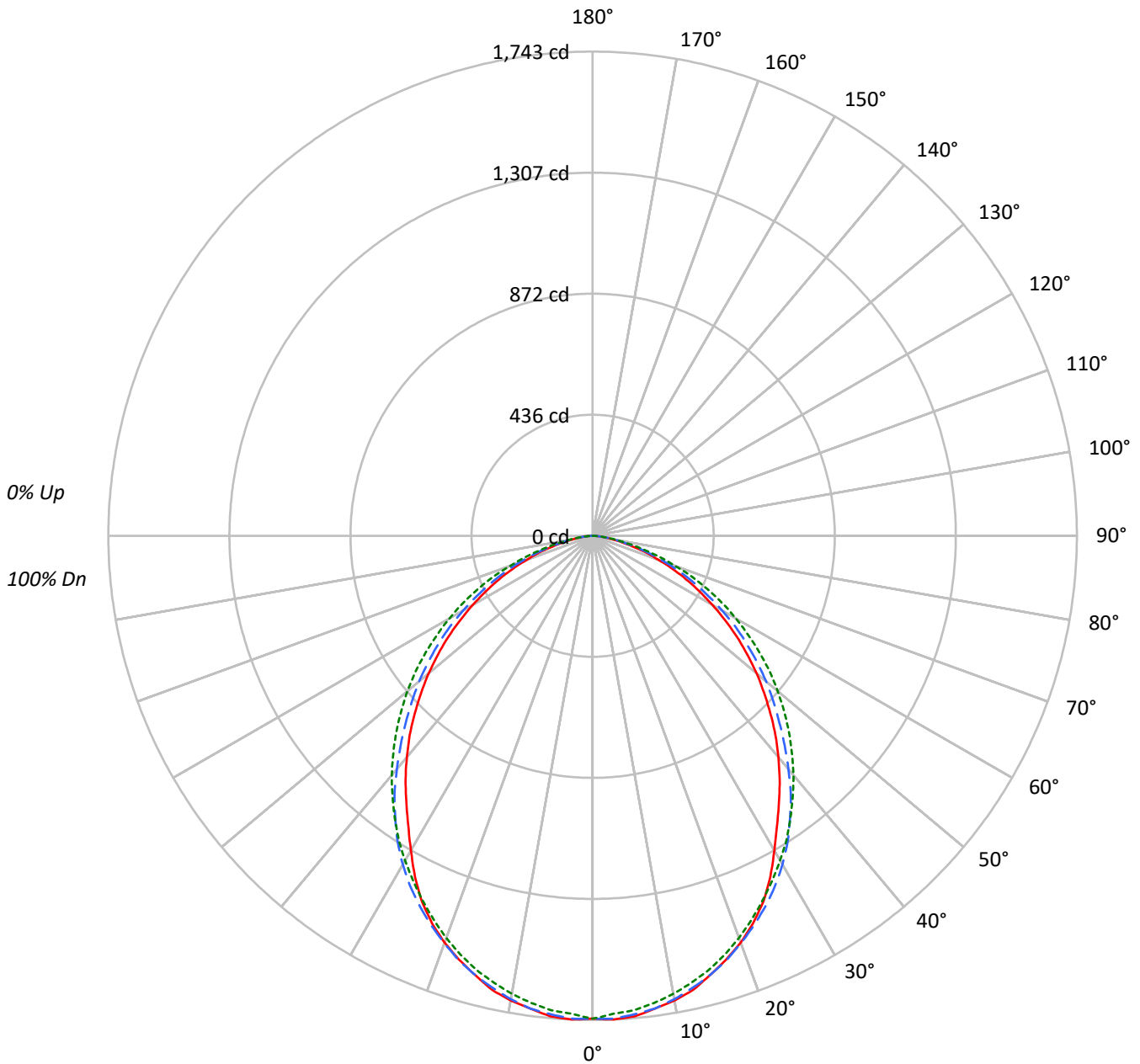
Lumens per Lamp: N/A  
Luminaire Lumens: 4020.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (A<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°	4678	4678	4678
5°	4691	4671	4631
10°	4641	4628	4575
15°	4559	4559	4507
20°	4462	4468	4411
25°	4315	4369	4299
30°	4064	4246	4194
35°	3840	4070	4077
40°	3653	3850	3951
45°	3444	3617	3803
50°	3224	3409	3641
55°	2974	3171	3444
60°	2678	2894	3203
65°	2365	2573	2913
70°	1971	2191	2475
75°	1548	1750	1937
80°	1108	1232	1367
85°	722	722	679



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.7	4.1
10°-20°	459.9	11.4
20°-30°	672.0	16.7
30°-40°	762.8	19.0
40°-50°	736.4	18.3
50°-60°	607.4	15.1
60°-70°	404.5	10.1
70°-80°	181.0	4.5
80°-90°	32.4	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°	1295.5	32.2
0°-40°	2058.3	51.2
0°-60°	3402.1	84.6
0°-90°	4020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4020.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1736	1736	1729	1720	1714	164
15°	1636	1640	1636	1629	1618	461
25°	1453	1465	1471	1461	1448	666
35°	1169	1185	1239	1246	1241	732
45°	905	920	950	994	999	698
55°	634	644	676	713	734	566
65°	371	381	404	433	458	368
75°	149	157	168	176	186	163
85°	23	23	23	22	22	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1738.5	1738.5	1738.5	1738.5	1738.5
2.5°	1743.2	1743.9	1739.9	1729.2	1722.5
5°	1736.5	1735.9	1729.2	1719.8	1714.5
7.5°	1717.2	1718.5	1716.5	1703.1	1695.8
10°	1698.5	1699.1	1693.8	1683.1	1674.4
12.5°	1674.4	1673.8	1666.4	1661.1	1647.0
15°	1636.4	1640.4	1636.4	1629.0	1617.7
17.5°	1599.6	1599.6	1602.3	1589.6	1580.9
20°	1558.2	1560.2	1560.2	1550.2	1540.2
22.5°	1510.1	1516.1	1518.1	1507.5	1495.4
25°	1453.4	1464.7	1471.4	1460.7	1448.0
27.5°	1384.6	1401.9	1422.0	1413.9	1399.9
30°	1307.8	1333.1	1366.5	1359.8	1349.8
32.5°	1234.9	1260.3	1306.4	1303.7	1298.4
35°	1168.8	1184.9	1239.0	1245.6	1241.0
37.5°	1106.0	1120.7	1171.5	1186.9	1182.9
40°	1039.9	1056.0	1096.0	1123.4	1124.7
42.5°	974.5	989.8	1022.6	1062.0	1062.0
45°	905.0	920.4	950.4	993.8	999.2
47.5°	836.9	852.9	882.3	925.7	934.4
50°	770.1	784.8	814.2	856.2	869.6
52.5°	700.6	716.7	745.4	784.1	803.5
55°	633.8	644.5	675.9	713.3	734.0
57.5°	564.4	574.4	609.8	641.9	663.2
60°	497.6	510.3	537.7	570.4	595.1
62.5°	433.5	446.8	470.2	498.9	527.0
65°	371.4	381.4	404.1	432.8	457.5
67.5°	311.2	319.9	342.6	362.7	388.7
70°	250.5	261.8	278.5	297.9	314.6
72.5°	201.7	206.4	220.4	234.4	251.8
75°	148.9	157.0	168.3	176.3	186.3
77.5°	106.9	111.5	118.2	124.9	134.2
80°	71.5	73.5	79.5	80.8	88.2
82.5°	43.4	44.7	46.1	46.8	49.4
85°	23.4	23.4	23.4	22.0	22.0
87.5°	13.4	13.4	11.4	9.4	6.7
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)