

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: P556289

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-81-84-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: P556289  
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-40-UNV-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

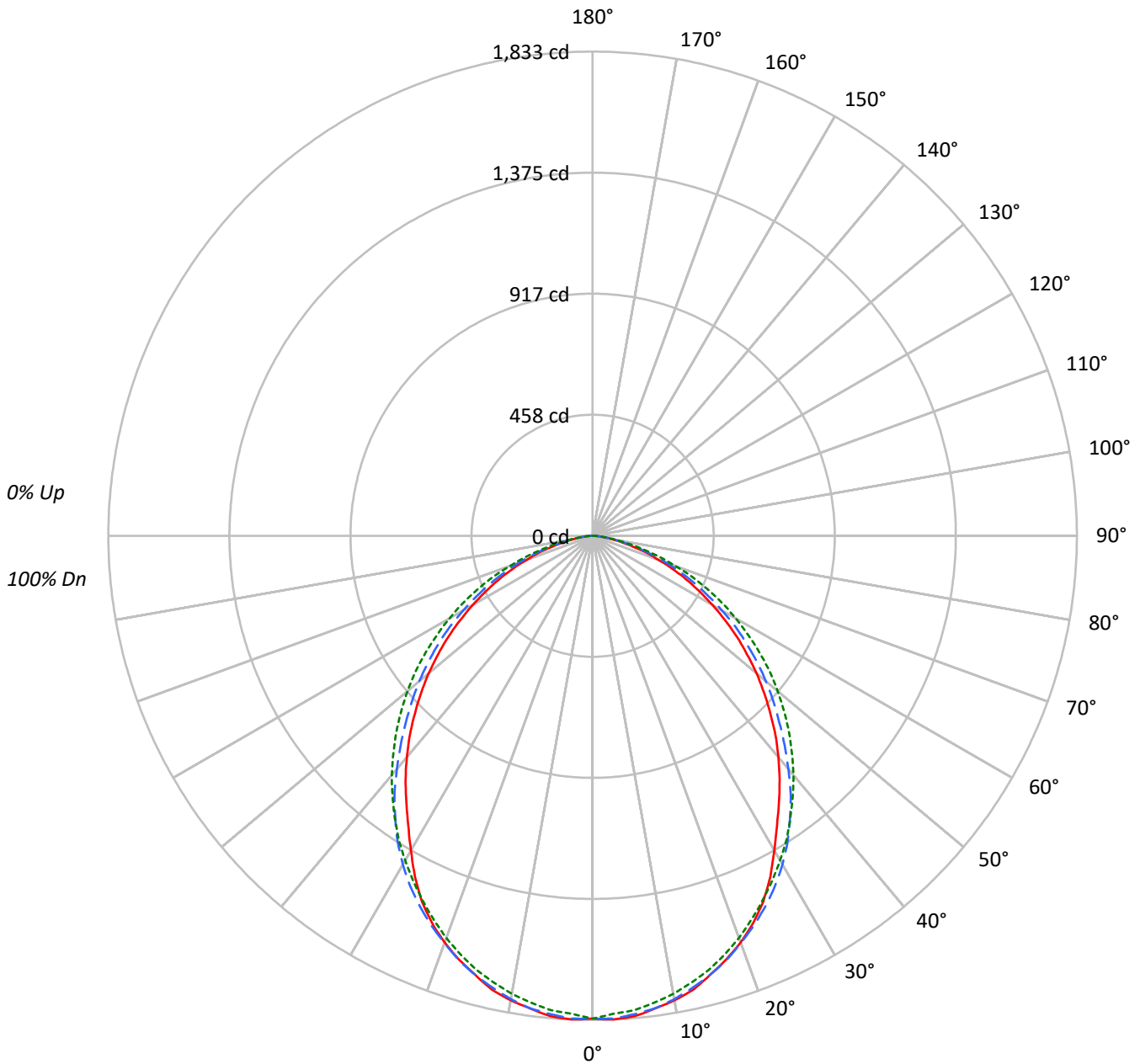
Lumens per Lamp: N/A  
Luminaire Lumens: 4227.0 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4919	4919	4919
5°	4932	4911	4870
10°	4880	4867	4811
15°	4793	4793	4739
20°	4692	4698	4638
25°	4537	4594	4521
30°	4273	4465	4410
35°	4037	4280	4287
40°	3841	4049	4155
45°	3621	3803	3998
50°	3390	3584	3828
55°	3127	3334	3621
60°	2816	3042	3367
65°	2486	2706	3063
70°	2072	2305	2603
75°	1628	1840	2037
80°	1164	1296	1437
85°	760	760	716



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.1	4.1
10°-20°	483.5	11.4
20°-30°	706.6	16.7
30°-40°	802.1	19.0
40°-50°	774.3	18.3
50°-60°	638.7	15.1
60°-70°	425.3	10.1
70°-80°	190.3	4.5
80°-90°	34.1	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°	1362.2	32.2
0°-40°	2164.3	51.2
0°-60°	3577.3	84.6
0°-90°	4227.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4227.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1828	1828	1828	1828	1828	
5°	1826	1825	1818	1808	1803	173
15°	1721	1725	1721	1713	1701	485
25°	1528	1540	1547	1536	1523	700
35°	1229	1246	1303	1310	1305	770
45°	952	968	999	1045	1051	734
55°	666	678	711	750	772	595
65°	390	401	425	455	481	387
75°	157	165	177	185	196	171
85°	25	25	25	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1828.1	1828.1	1828.1	1828.1	1828.1
2.5°	1833.0	1833.7	1829.5	1818.2	1811.2
5°	1826.0	1825.3	1818.2	1808.4	1802.8
7.5°	1805.6	1807.0	1804.9	1790.8	1783.1
10°	1785.9	1786.6	1781.0	1769.8	1760.6
12.5°	1760.6	1759.9	1752.2	1746.6	1731.9
15°	1720.6	1724.8	1720.6	1712.9	1701.0
17.5°	1682.0	1682.0	1684.8	1671.5	1662.3
20°	1638.4	1640.6	1640.6	1630.0	1619.5
22.5°	1587.9	1594.2	1596.3	1585.1	1572.4
25°	1528.2	1540.1	1547.2	1535.9	1522.6
27.5°	1455.9	1474.1	1495.2	1486.8	1472.0
30°	1375.1	1401.8	1436.9	1429.9	1419.3
32.5°	1298.5	1325.2	1373.7	1370.9	1365.3
35°	1229.0	1245.9	1302.8	1309.8	1304.9
37.5°	1163.0	1178.4	1231.8	1248.0	1243.8
40°	1093.5	1110.3	1152.5	1181.3	1182.7
42.5°	1024.6	1040.8	1075.2	1116.6	1116.6
45°	951.6	967.8	999.4	1045.0	1050.6
47.5°	880.0	896.8	927.7	973.4	982.5
50°	809.7	825.2	856.1	900.3	914.4
52.5°	736.7	753.6	783.8	824.5	844.9
55°	666.5	677.7	710.7	750.0	771.8
57.5°	593.4	604.0	641.2	674.9	697.4
60°	523.2	536.6	565.3	599.8	625.7
62.5°	455.8	469.8	494.4	524.6	554.1
65°	390.5	401.0	424.9	455.1	481.1
67.5°	327.3	336.4	360.3	381.3	408.7
70°	263.4	275.3	292.9	313.2	330.8
72.5°	212.1	217.0	231.8	246.5	264.8
75°	156.6	165.0	177.0	185.4	195.9
77.5°	112.4	117.3	124.3	131.3	141.2
80°	75.1	77.3	83.6	85.0	92.7
82.5°	45.6	47.1	48.5	49.2	52.0
85°	24.6	24.6	24.6	23.2	23.2
87.5°	14.0	14.0	11.9	9.8	7.0
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)