

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: P556329

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-88-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: P556329  
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-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

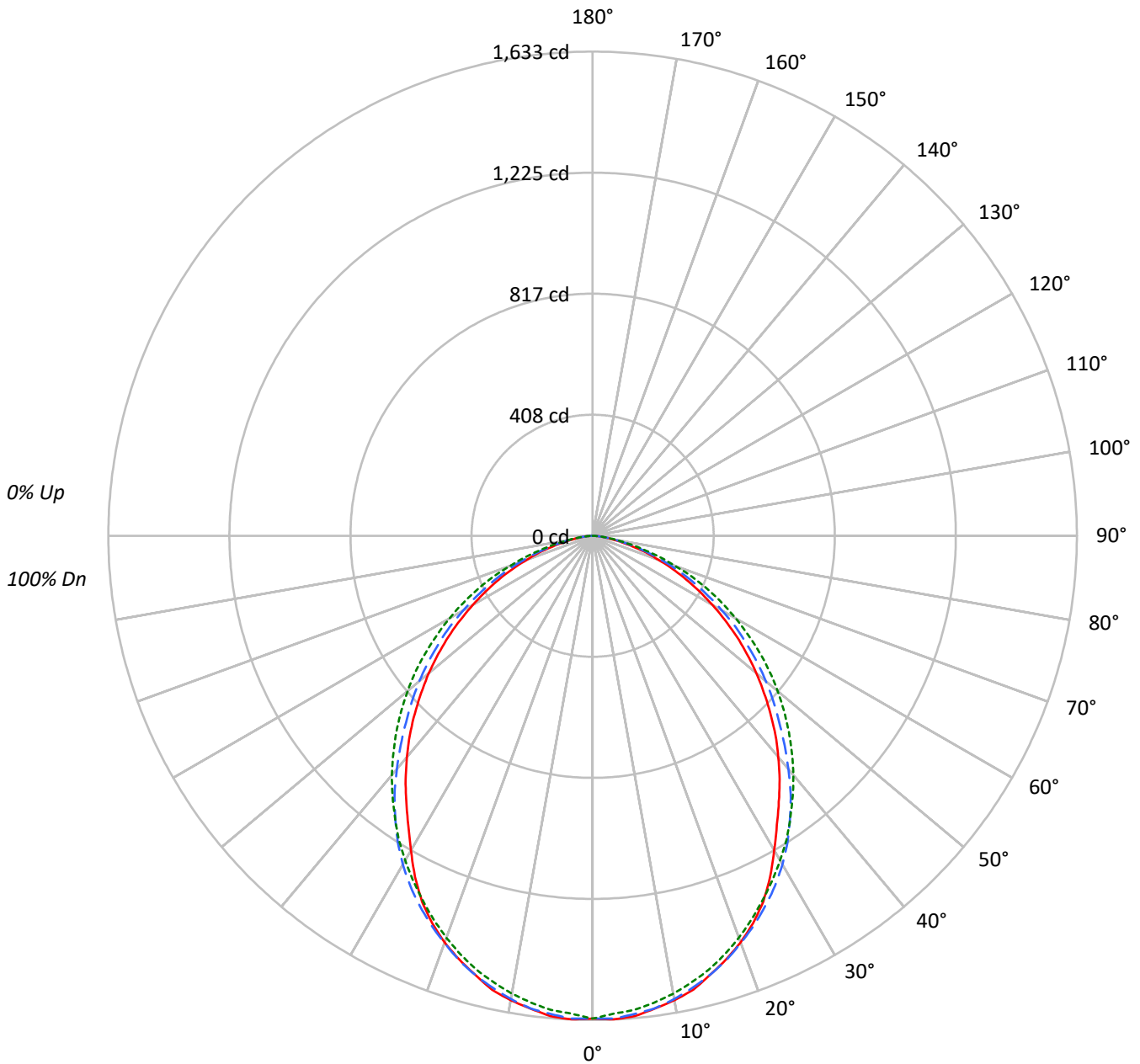
Lumens per Lamp: N/A  
Luminaire Lumens: 3765.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4382	4382	4382
5°	4393	4375	4337
10°	4347	4335	4285
15°	4270	4270	4221
20°	4179	4184	4131
25°	4042	4092	4027
30°	3806	3977	3928
35°	3596	3812	3818
40°	3421	3606	3700
45°	3226	3387	3561
50°	3019	3192	3409
55°	2785	2970	3225
60°	2508	2710	3000
65°	2215	2409	2728
70°	1846	2052	2318
75°	1450	1639	1814
80°	1037	1153	1280
85°	676	676	636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.3	4.1
10°-20°	430.7	11.4
20°-30°	629.4	16.7
30°-40°	714.4	19.0
40°-50°	689.6	18.3
50°-60°	568.9	15.1
60°-70°	378.8	10.1
70°-80°	169.5	4.5
80°-90°	30.3	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°	1213.4	32.2
0°-40°	1927.8	51.2
0°-60°	3186.3	84.6
0°-90°	3765.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3765.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1626	1626	1620	1611	1606	154
15°	1533	1536	1533	1526	1515	432
25°	1361	1372	1378	1368	1356	623
35°	1095	1110	1160	1167	1162	686
45°	848	862	890	931	936	654
55°	594	604	633	668	688	530
65°	348	357	378	405	428	345
75°	140	147	158	165	174	153
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1628.3	1628.3	1628.3	1628.3	1628.3
2.5°	1632.6	1633.3	1629.5	1619.5	1613.3
5°	1626.4	1625.8	1619.5	1610.8	1605.7
7.5°	1608.2	1609.5	1607.6	1595.1	1588.2
10°	1590.7	1591.4	1586.4	1576.3	1568.2
12.5°	1568.2	1567.6	1560.7	1555.7	1542.6
15°	1532.6	1536.3	1532.6	1525.7	1515.0
17.5°	1498.2	1498.2	1500.7	1488.8	1480.6
20°	1459.4	1461.2	1461.2	1451.9	1442.5
22.5°	1414.3	1420.0	1421.8	1411.8	1400.6
25°	1361.2	1371.8	1378.1	1368.0	1356.2
27.5°	1296.7	1313.0	1331.8	1324.3	1311.1
30°	1224.8	1248.6	1279.8	1273.6	1264.2
32.5°	1156.6	1180.4	1223.5	1221.0	1216.0
35°	1094.7	1109.7	1160.4	1166.6	1162.2
37.5°	1035.9	1049.6	1097.2	1111.6	1107.8
40°	974.0	989.0	1026.5	1052.1	1053.4
42.5°	912.7	927.0	957.7	994.6	994.6
45°	847.6	862.0	890.1	930.8	935.8
47.5°	783.8	798.8	826.3	867.0	875.1
50°	721.2	735.0	762.5	801.9	814.4
52.5°	656.2	671.2	698.1	734.4	752.5
55°	593.6	603.6	633.0	668.1	687.5
57.5°	528.6	538.0	571.1	601.1	621.2
60°	466.0	477.9	503.6	534.2	557.4
62.5°	406.0	418.5	440.4	467.3	493.5
65°	347.8	357.2	378.4	405.3	428.5
67.5°	291.5	299.6	320.9	339.7	364.1
70°	234.6	245.2	260.8	279.0	294.6
72.5°	188.9	193.3	206.4	219.6	235.8
75°	139.5	147.0	157.6	165.1	174.5
77.5°	100.1	104.5	110.7	117.0	125.7
80°	66.9	68.8	74.4	75.7	82.6
82.5°	40.7	41.9	43.2	43.8	46.3
85°	21.9	21.9	21.9	20.6	20.6
87.5°	12.5	12.5	10.6	8.8	6.3
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)