

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: P556103

Luminaire Tested: **FUSL-12-2-LD4-3STD-50-UNV-81-87-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: P556103  
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-12-2-LD4-3STD-50-UNV-81-87-EDD  
Description: 2FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

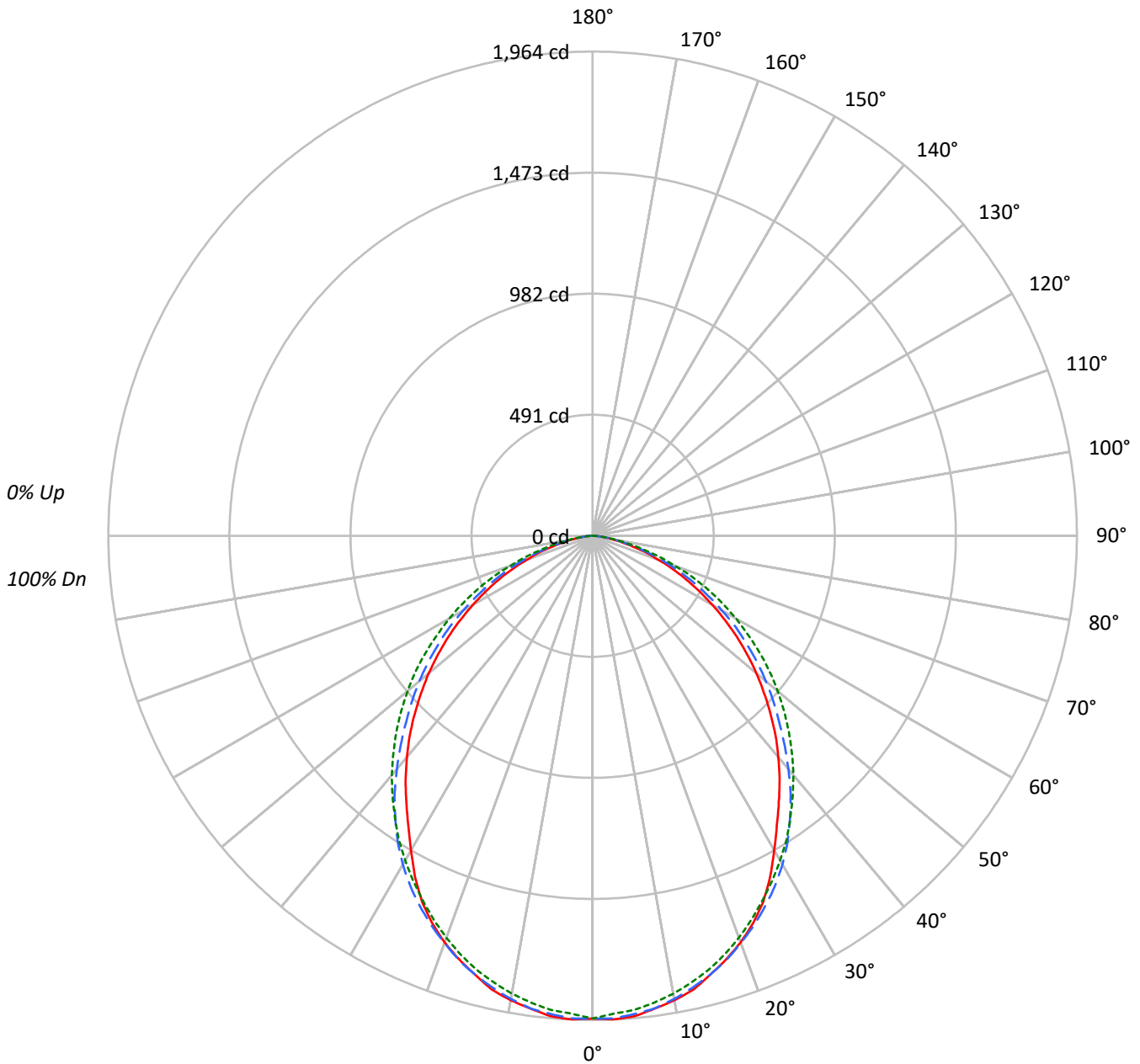
Lumens per Lamp: N/A  
Luminaire Lumens: 4528.0 lumens  
Efficiency: N/A  
Efficacy: 90.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 50  
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°	10539	10539	10539
5°	10567	10522	10433
10°	10455	10426	10307
15°	10269	10269	10152
20°	10052	10065	9936
25°	9721	9842	9685
30°	9154	9565	9449
35°	8650	9169	9184
40°	8229	8673	8901
45°	7759	8148	8566
50°	7263	7679	8201
55°	6699	7143	7758
60°	6033	6519	7215
65°	5327	5796	6562
70°	4439	4936	5575
75°	3489	3943	4365
80°	2495	2774	3078
85°	1624	1624	1531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.4	4.1
10°-20°	518.0	11.4
20°-30°	756.9	16.7
30°-40°	859.2	19.0
40°-50°	829.4	18.3
50°-60°	684.2	15.1
60°-70°	455.6	10.1
70°-80°	203.9	4.5
80°-90°	36.5	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°	1459.2	32.2
0°-40°	2318.4	51.2
0°-60°	3832.0	84.6
0°-90°	4528.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4528.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1958	1958	1958	1958	1958	
5°	1956	1955	1948	1937	1931	185
15°	1843	1848	1843	1835	1822	520
25°	1637	1650	1657	1645	1631	750
35°	1316	1335	1396	1403	1398	825
45°	1019	1037	1070	1119	1125	786
55°	714	726	761	804	827	637
65°	418	430	455	488	515	415
75°	168	177	190	199	210	183
85°	26	26	26	25	25	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1958.2	1958.2	1958.2	1958.2	1958.2
2.5°	1963.5	1964.3	1959.7	1947.7	1940.2
5°	1956.0	1955.2	1947.7	1937.2	1931.2
7.5°	1934.2	1935.7	1933.4	1918.4	1910.1
10°	1913.1	1913.9	1907.8	1895.8	1886.0
12.5°	1886.0	1885.3	1877.0	1871.0	1855.2
15°	1843.1	1847.7	1843.1	1834.9	1822.1
17.5°	1801.8	1801.8	1804.8	1790.5	1780.7
20°	1755.1	1757.4	1757.4	1746.1	1734.8
22.5°	1701.0	1707.7	1710.0	1697.9	1684.4
25°	1637.0	1649.8	1657.3	1645.3	1631.0
27.5°	1559.5	1579.1	1601.7	1592.6	1576.8
30°	1473.0	1501.6	1539.2	1531.7	1520.4
32.5°	1391.0	1419.6	1471.5	1468.5	1462.5
35°	1316.5	1334.6	1395.5	1403.0	1397.8
37.5°	1245.8	1262.4	1319.5	1336.8	1332.3
40°	1171.3	1189.4	1234.5	1265.4	1266.9
42.5°	1097.6	1114.9	1151.8	1196.2	1196.2
45°	1019.4	1036.7	1070.5	1119.4	1125.4
47.5°	942.6	960.7	993.8	1042.7	1052.5
50°	867.4	884.0	917.1	964.5	979.5
52.5°	789.2	807.2	839.6	883.2	905.0
55°	713.9	726.0	761.3	803.5	826.8
57.5°	635.7	647.0	686.9	723.0	747.0
60°	560.5	574.8	605.6	642.5	670.3
62.5°	488.2	503.3	529.6	562.0	593.6
65°	418.3	429.6	455.1	487.5	515.3
67.5°	350.6	360.4	385.9	408.5	437.8
70°	282.1	294.9	313.7	335.5	354.3
72.5°	227.2	232.5	248.3	264.1	283.6
75°	167.8	176.8	189.6	198.6	209.9
77.5°	120.4	125.6	133.2	140.7	151.2
80°	80.5	82.8	89.5	91.0	99.3
82.5°	48.9	50.4	51.9	52.7	55.7
85°	26.3	26.3	26.3	24.8	24.8
87.5°	15.0	15.0	12.8	10.5	7.5
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)