

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: P557280

Luminaire Tested: **FUSL-12-4-LD4-2LO-35-UNV-93-84-EDD-90**

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: P557280  
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-LD4-2LO-35-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

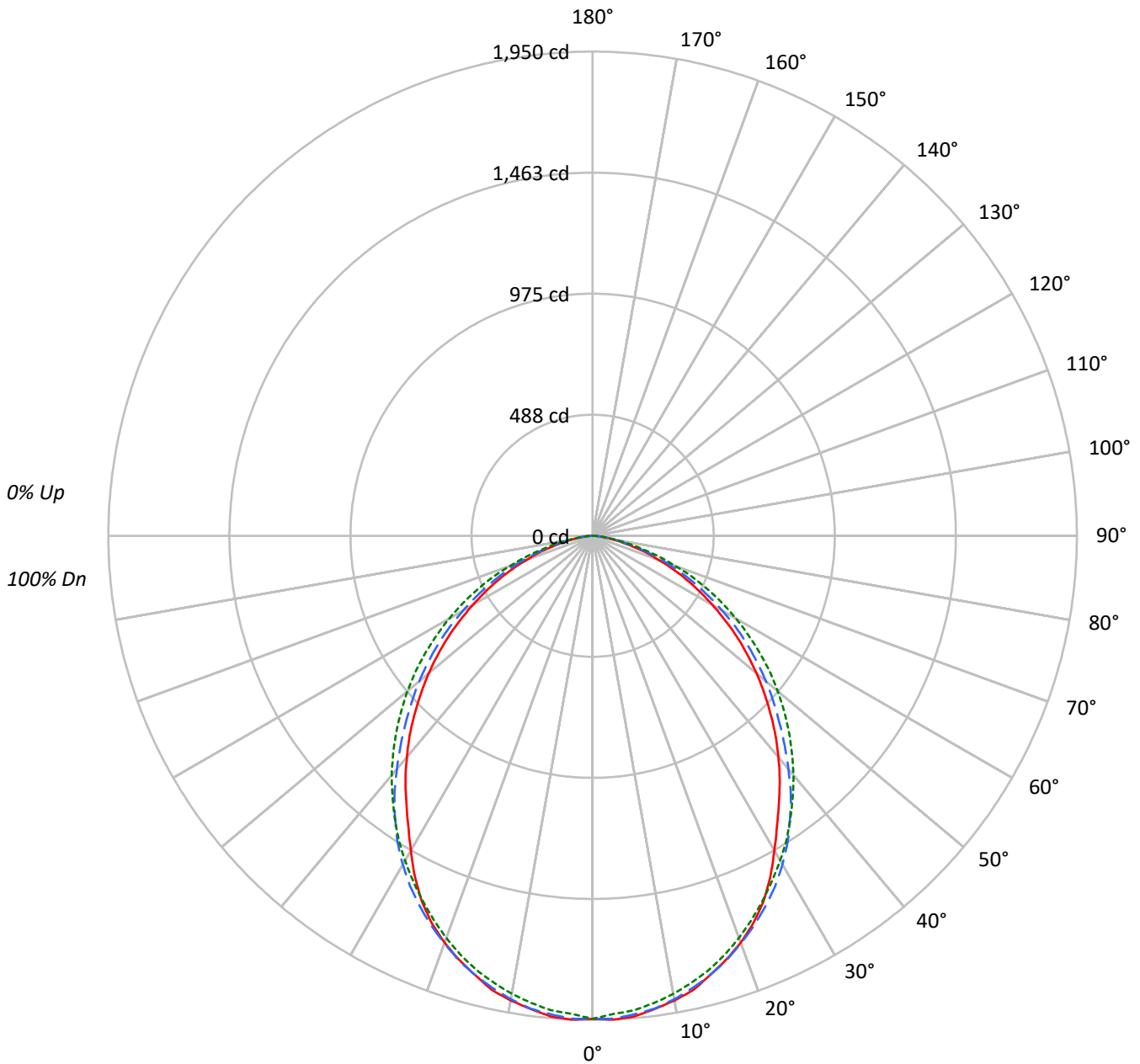
Lumens per Lamp: N/A  
Luminaire Lumens: 4498.0 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	5235	5235	5235
5°	5249	5226	5182
10°	5193	5179	5119
15°	5101	5101	5042
20°	4993	4999	4935
25°	4828	4888	4811
30°	4547	4751	4693
35°	4296	4554	4561
40°	4088	4308	4421
45°	3854	4047	4255
50°	3607	3814	4073
55°	3327	3548	3853
60°	2997	3238	3584
65°	2646	2879	3259
70°	2205	2452	2769
75°	1733	1958	2168
80°	1240	1378	1528
85°	809	809	763



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.2	4.1
10°-20°	514.5	11.4
20°-30°	751.9	16.7
30°-40°	853.5	19.0
40°-50°	823.9	18.3
50°-60°	679.7	15.1
60°-70°	452.6	10.1
70°-80°	202.5	4.5
80°-90°	36.2	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°	1449.6	32.2
0°-40°	2303.1	51.2
0°-60°	3806.6	84.6
0°-90°	4498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4498.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1945	1945	1945	1945	1945	
5°	1943	1942	1935	1924	1918	184
15°	1831	1835	1831	1823	1810	516
25°	1626	1639	1646	1634	1620	745
35°	1308	1326	1386	1394	1388	819
45°	1013	1030	1063	1112	1118	781
55°	709	721	756	798	821	633
65°	416	427	452	484	512	412
75°	167	176	188	197	208	182
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°	1945.3	1945.3	1945.3	1945.3	1945.3
2.5°	1950.5	1951.2	1946.8	1934.8	1927.3
5°	1943.0	1942.3	1934.8	1924.3	1918.4
7.5°	1921.4	1922.8	1920.6	1905.7	1897.4
10°	1900.4	1901.2	1895.2	1883.2	1873.5
12.5°	1873.5	1872.8	1864.6	1858.6	1842.9
15°	1830.9	1835.4	1830.9	1822.7	1810.0
17.5°	1789.8	1789.8	1792.8	1778.6	1768.9
20°	1743.5	1745.7	1745.7	1734.5	1723.3
22.5°	1689.7	1696.4	1698.7	1686.7	1673.2
25°	1626.2	1638.9	1646.3	1634.4	1620.2
27.5°	1549.2	1568.6	1591.0	1582.1	1566.4
30°	1463.2	1491.6	1529.0	1521.5	1510.3
32.5°	1381.8	1410.2	1461.8	1458.8	1452.8
35°	1307.8	1325.7	1386.3	1393.7	1388.5
37.5°	1237.6	1254.0	1310.8	1328.0	1323.5
40°	1163.6	1181.5	1226.3	1257.0	1258.5
42.5°	1090.3	1107.5	1144.1	1188.2	1188.2
45°	1012.6	1029.8	1063.4	1112.0	1118.0
47.5°	936.4	954.3	987.2	1035.8	1045.5
50°	861.7	878.1	911.0	958.1	973.0
52.5°	783.9	801.9	834.0	877.4	899.0
55°	709.2	721.2	756.3	798.1	821.3
57.5°	631.5	642.7	682.3	718.2	742.1
60°	556.8	571.0	601.6	638.2	665.9
62.5°	485.0	500.0	526.1	558.2	589.6
65°	415.5	426.7	452.1	484.3	511.9
67.5°	348.3	358.0	383.4	405.8	434.9
70°	280.2	292.9	311.6	333.3	352.0
72.5°	225.7	230.9	246.6	262.3	281.7
75°	166.7	175.6	188.3	197.3	208.5
77.5°	119.6	124.8	132.3	139.7	150.2
80°	80.0	82.2	88.9	90.4	98.6
82.5°	48.6	50.1	51.6	52.3	55.3
85°	26.2	26.2	26.2	24.7	24.7
87.5°	14.9	14.9	12.7	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)