

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: P557349

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-86-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: P557349  
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-40-UNV-93-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

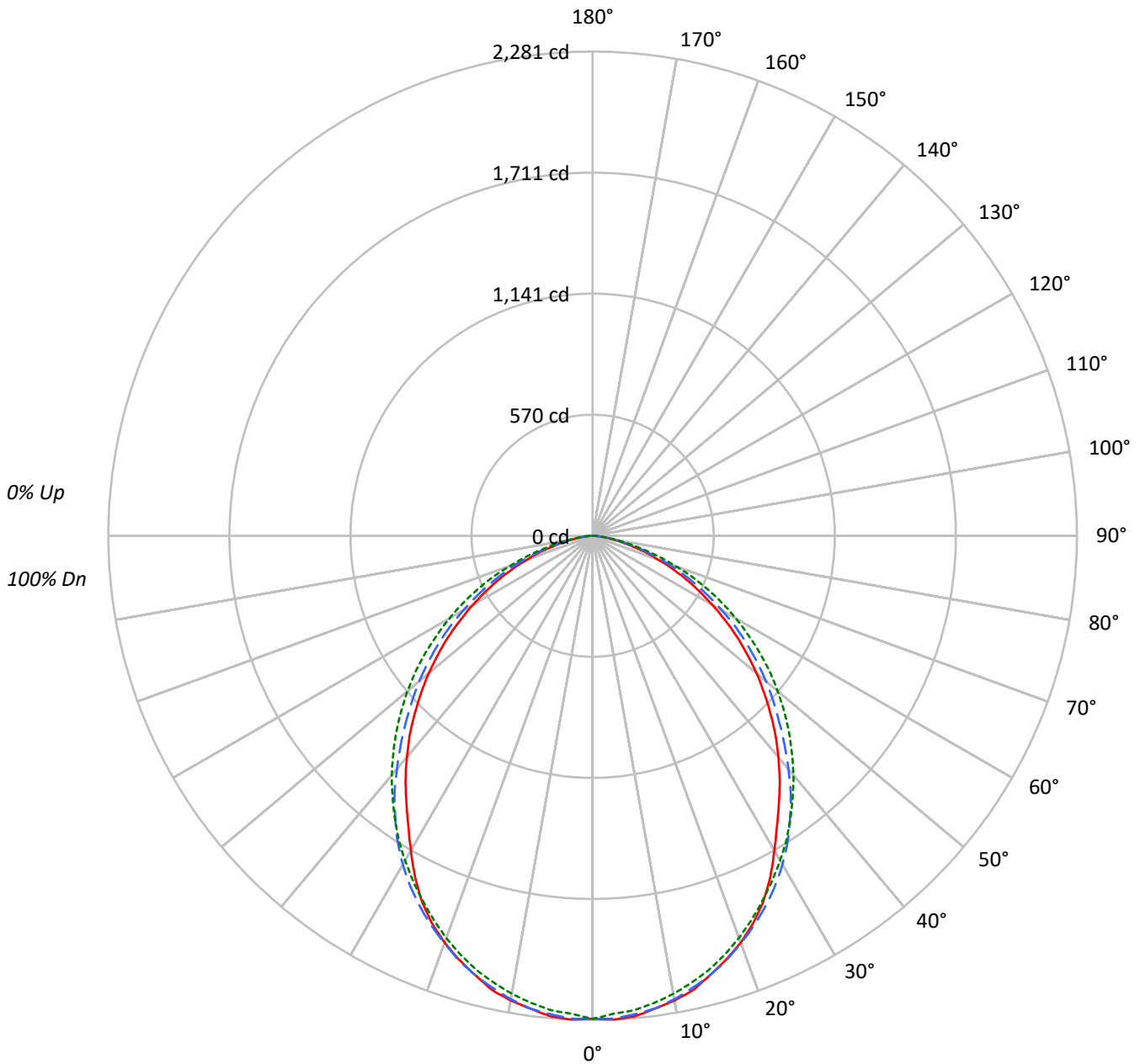
Lumens per Lamp: N/A  
Luminaire Lumens: 5261.0 lumens  
Efficiency: N/A  
Efficacy: 112.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6123	6123	6123
5°	6139	6113	6061
10°	6074	6057	5988
15°	5966	5966	5898
20°	5840	5847	5772
25°	5647	5717	5627
30°	5318	5557	5489
35°	5025	5326	5335
40°	4781	5039	5171
45°	4507	4733	4976
50°	4219	4461	4765
55°	3892	4150	4507
60°	3505	3787	4191
65°	3095	3367	3812
70°	2579	2868	3239
75°	2026	2290	2536
80°	1449	1612	1788
85°	945	945	889



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	214.2	4.1
10°-20°	601.8	11.4
20°-30°	879.4	16.7
30°-40°	998.3	19.0
40°-50°	963.7	18.3
50°-60°	795.0	15.1
60°-70°	529.4	10.1
70°-80°	236.9	4.5
80°-90°	42.4	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°	1695.5	32.2
0°-40°	2693.7	51.2
0°-60°	4452.3	84.6
0°-90°	5261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5261.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2275	2275	2275	2275	2275	
5°	2273	2272	2263	2251	2244	215
15°	2142	2147	2142	2132	2117	604
25°	1902	1917	1926	1912	1895	871
35°	1530	1551	1621	1630	1624	958
45°	1184	1204	1244	1301	1308	914
55°	830	844	885	934	961	740
65°	486	499	529	566	599	482
75°	195	205	220	231	244	213
85°	31	31	31	29	29	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2275.2	2275.2	2275.2	2275.2	2275.2
2.5°	2281.4	2282.2	2277.0	2263.0	2254.3
5°	2272.6	2271.8	2263.0	2250.8	2243.8
7.5°	2247.3	2249.0	2246.4	2228.9	2219.3
10°	2222.8	2223.7	2216.7	2202.7	2191.3
12.5°	2191.3	2190.5	2180.8	2173.9	2155.5
15°	2141.5	2146.8	2141.5	2131.9	2117.0
17.5°	2093.4	2093.4	2096.9	2080.3	2069.0
20°	2039.2	2041.9	2041.9	2028.8	2015.6
22.5°	1976.3	1984.2	1986.8	1972.8	1957.1
25°	1902.0	1916.9	1925.6	1911.6	1895.0
27.5°	1812.0	1834.7	1860.9	1850.4	1832.1
30°	1711.5	1744.7	1788.4	1779.6	1766.5
32.5°	1616.2	1649.4	1709.7	1706.2	1699.2
35°	1529.7	1550.6	1621.4	1630.2	1624.1
37.5°	1447.5	1466.7	1533.1	1553.3	1548.0
40°	1361.0	1381.9	1434.4	1470.2	1472.0
42.5°	1275.3	1295.4	1338.2	1389.8	1389.8
45°	1184.4	1204.5	1243.8	1300.6	1307.6
47.5°	1095.2	1116.2	1154.7	1211.5	1222.8
50°	1007.8	1027.1	1065.5	1120.6	1138.1
52.5°	916.9	937.9	975.5	1026.2	1051.5
55°	829.5	843.5	884.6	933.5	960.6
57.5°	738.6	751.7	798.0	840.0	868.0
60°	651.2	667.8	703.6	746.5	778.8
62.5°	567.3	584.8	615.4	652.9	689.7
65°	486.0	499.1	528.8	566.4	598.7
67.5°	407.3	418.7	448.4	474.6	508.7
70°	327.8	342.6	364.5	389.8	411.7
72.5°	264.0	270.1	288.4	306.8	329.5
75°	194.9	205.4	220.3	230.8	243.9
77.5°	139.9	146.0	154.7	163.5	175.7
80°	93.5	96.1	104.0	105.8	115.4
82.5°	56.8	58.6	60.3	61.2	64.7
85°	30.6	30.6	30.6	28.8	28.8
87.5°	17.5	17.5	14.9	12.2	8.7
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)