

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: P557414

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-87-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: P557414  
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-50-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

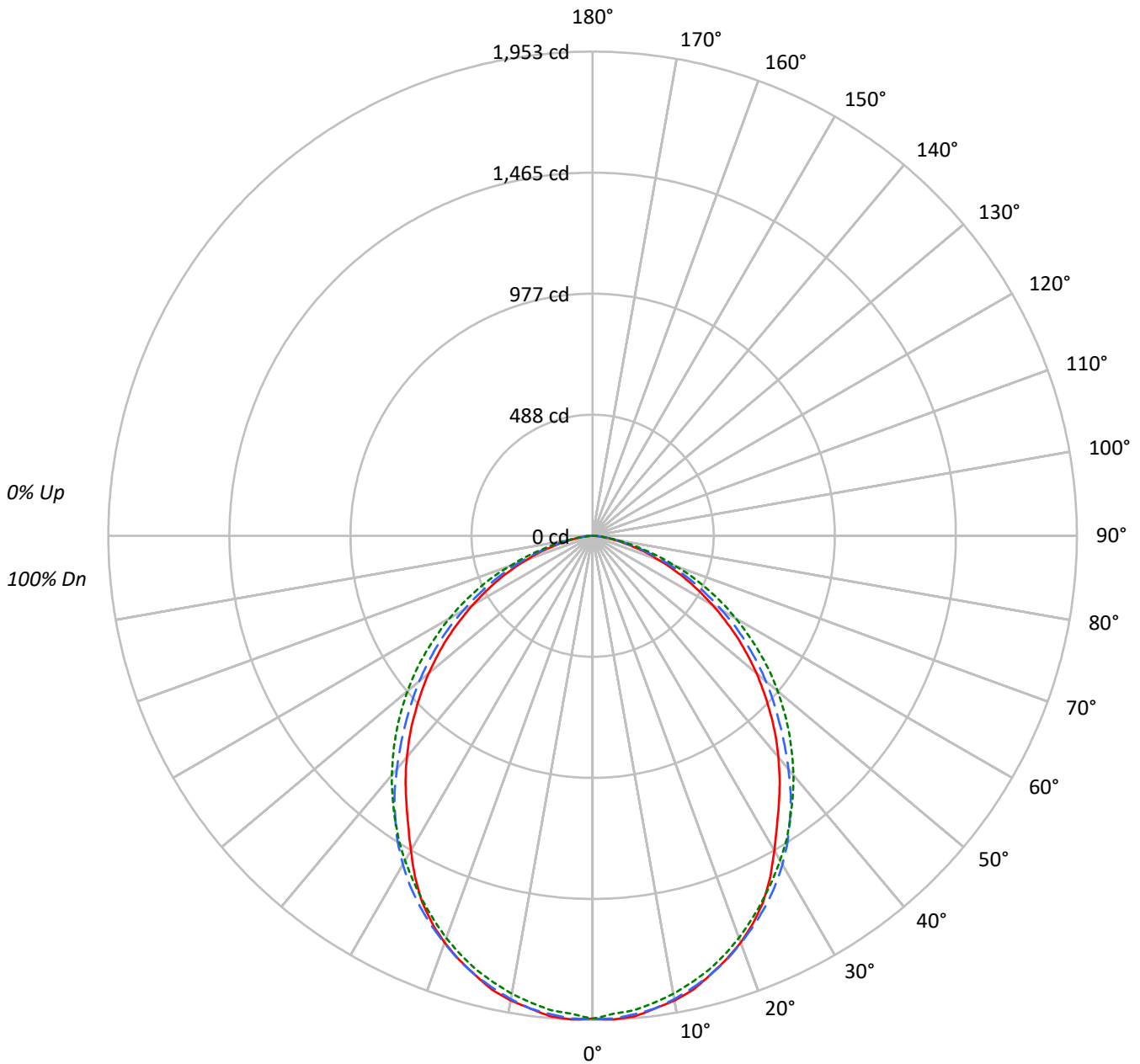
Lumens per Lamp: N/A  
Luminaire Lumens: 4504.0 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	5242	5242	5242
5°	5256	5233	5189
10°	5200	5185	5126
15°	5108	5108	5049
20°	4999	5006	4942
25°	4835	4895	4817
30°	4553	4758	4699
35°	4302	4560	4568
40°	4093	4314	4427
45°	3859	4053	4260
50°	3612	3819	4079
55°	3332	3553	3858
60°	3000	3242	3588
65°	2649	2883	3264
70°	2208	2455	2773
75°	1735	1961	2171
80°	1241	1379	1531
85°	809	809	763



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.4	4.1
10°-20°	515.2	11.4
20°-30°	752.9	16.7
30°-40°	854.6	19.0
40°-50°	825.0	18.3
50°-60°	680.6	15.1
60°-70°	453.2	10.1
70°-80°	202.8	4.5
80°-90°	36.3	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°	1451.5	32.2
0°-40°	2306.1	51.2
0°-60°	3811.7	84.6
0°-90°	4504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4504.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1948	1948	1948	1948	1948	
5°	1946	1945	1937	1927	1921	184
15°	1833	1838	1833	1825	1812	517
25°	1628	1641	1648	1637	1622	746
35°	1310	1328	1388	1396	1390	821
45°	1014	1031	1065	1114	1120	782
55°	710	722	757	799	822	634
65°	416	427	453	485	513	413
75°	167	176	189	198	209	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°	1947.9	1947.9	1947.9	1947.9	1947.9
2.5°	1953.1	1953.9	1949.4	1937.4	1929.9
5°	1945.6	1944.9	1937.4	1926.9	1920.9
7.5°	1923.9	1925.4	1923.2	1908.2	1900.0
10°	1903.0	1903.7	1897.7	1885.8	1876.0
12.5°	1876.0	1875.3	1867.0	1861.1	1845.3
15°	1833.4	1837.9	1833.4	1825.1	1812.4
17.5°	1792.2	1792.2	1795.2	1781.0	1771.3
20°	1745.8	1748.1	1748.1	1736.8	1725.6
22.5°	1691.9	1698.7	1700.9	1688.9	1675.5
25°	1628.3	1641.1	1648.5	1636.6	1622.3
27.5°	1551.3	1570.7	1593.2	1584.2	1568.5
30°	1465.2	1493.6	1531.1	1523.6	1512.3
32.5°	1383.6	1412.1	1463.7	1460.7	1454.7
35°	1309.6	1327.5	1388.1	1395.6	1390.4
37.5°	1239.2	1255.7	1312.5	1329.8	1325.3
40°	1165.1	1183.1	1228.0	1258.7	1260.2
42.5°	1091.8	1109.0	1145.7	1189.8	1189.8
45°	1014.0	1031.2	1064.9	1113.5	1119.5
47.5°	937.6	955.6	988.5	1037.2	1046.9
50°	862.8	879.3	912.2	959.3	974.3
52.5°	785.0	802.9	835.1	878.5	900.2
55°	710.2	722.1	757.3	799.2	822.4
57.5°	632.3	643.6	683.2	719.1	743.1
60°	557.5	571.7	602.4	639.1	666.7
62.5°	485.7	500.6	526.8	559.0	590.4
65°	416.1	427.3	452.7	484.9	512.6
67.5°	348.7	358.4	383.9	406.3	435.5
70°	280.6	293.3	312.0	333.7	352.5
72.5°	226.0	231.2	246.9	262.7	282.1
75°	166.9	175.9	188.6	197.6	208.8
77.5°	119.7	125.0	132.5	139.9	150.4
80°	80.1	82.3	89.0	90.5	98.8
82.5°	48.6	50.1	51.6	52.4	55.4
85°	26.2	26.2	26.2	24.7	24.7
87.5°	15.0	15.0	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)