

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: P556333

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-96-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: P556333  
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-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

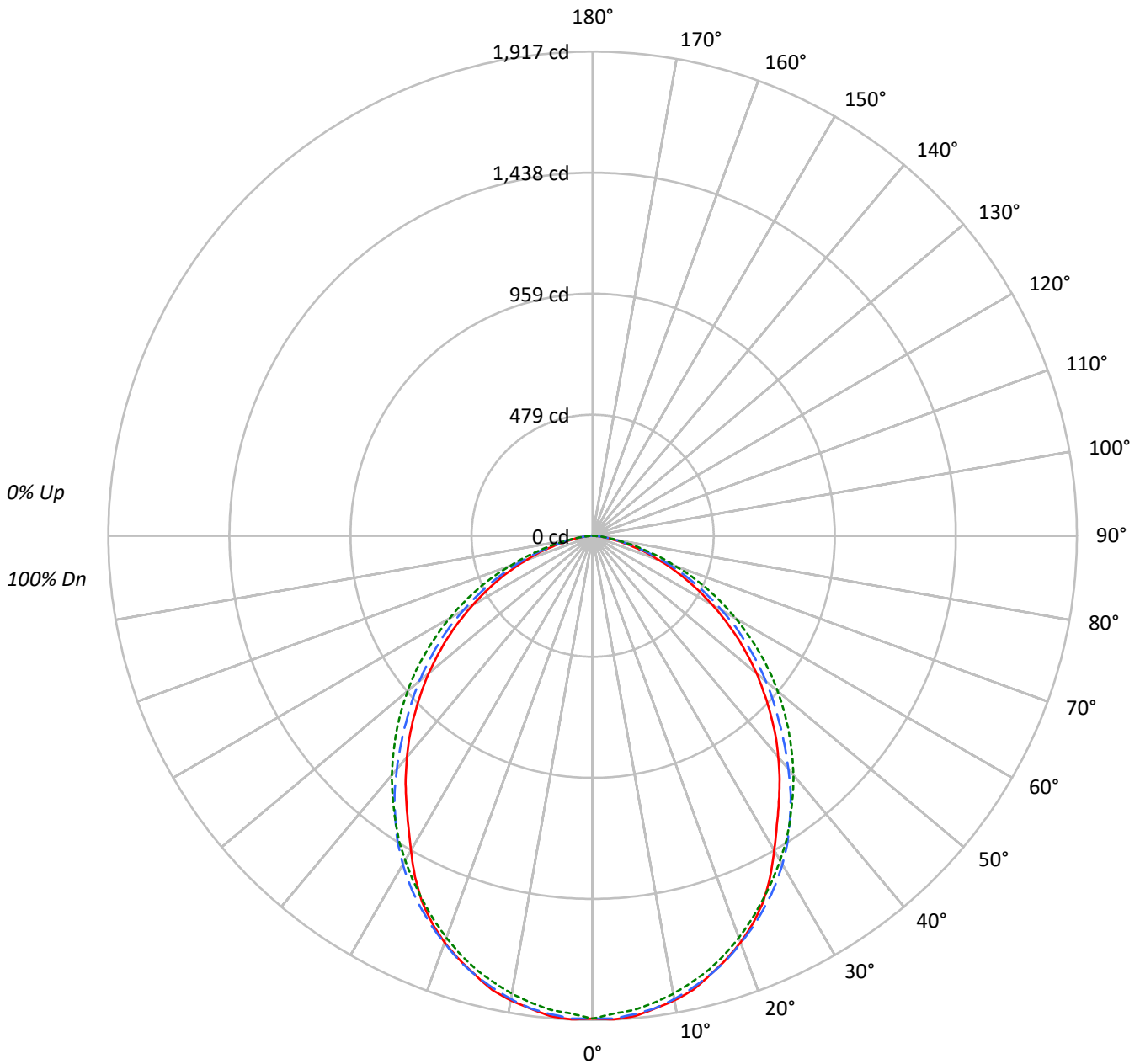
Lumens per Lamp: N/A  
Luminaire Lumens: 4420.0 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	5144	5144	5144
5°	5158	5136	5092
10°	5103	5089	5031
15°	5012	5012	4955
20°	4906	4913	4849
25°	4745	4804	4727
30°	4468	4669	4612
35°	4222	4475	4482
40°	4017	4233	4344
45°	3787	3977	4181
50°	3545	3748	4003
55°	3270	3487	3787
60°	2944	3182	3521
65°	2600	2829	3203
70°	2167	2409	2722
75°	1703	1925	2130
80°	1218	1354	1502
85°	794	794	747



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.0	4.1
10°-20°	505.6	11.4
20°-30°	738.9	16.7
30°-40°	838.7	19.0
40°-50°	809.6	18.3
50°-60°	667.9	15.1
60°-70°	444.8	10.1
70°-80°	199.0	4.5
80°-90°	35.6	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°	1424.4	32.2
0°-40°	2263.1	51.2
0°-60°	3740.6	84.6
0°-90°	4420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4420.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1912	1912	1912	1912	1912	
5°	1909	1909	1901	1891	1885	181
15°	1799	1804	1799	1791	1779	507
25°	1598	1610	1618	1606	1592	732
35°	1285	1303	1362	1370	1364	805
45°	995	1012	1045	1093	1099	768
55°	697	709	743	784	807	622
65°	408	419	444	476	503	405
75°	164	173	185	194	205	179
85°	26	26	26	24	24	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1911.5	1911.5	1911.5	1911.5	1911.5
2.5°	1916.7	1917.4	1913.0	1901.3	1893.9
5°	1909.3	1908.6	1901.3	1891.0	1885.1
7.5°	1888.0	1889.5	1887.3	1872.6	1864.5
10°	1867.5	1868.2	1862.3	1850.6	1841.0
12.5°	1841.0	1840.3	1832.2	1826.4	1810.9
15°	1799.2	1803.6	1799.2	1791.1	1778.6
17.5°	1758.8	1758.8	1761.7	1747.8	1738.2
20°	1713.3	1715.5	1715.5	1704.4	1693.4
22.5°	1660.4	1667.0	1669.2	1657.4	1644.2
25°	1598.0	1610.4	1617.8	1606.0	1592.1
27.5°	1522.3	1541.4	1563.4	1554.6	1539.2
30°	1437.9	1465.8	1502.5	1495.2	1484.1
32.5°	1357.8	1385.7	1436.4	1433.5	1427.6
35°	1285.1	1302.8	1362.2	1369.6	1364.4
37.5°	1216.1	1232.3	1288.1	1305.0	1300.5
40°	1143.4	1161.0	1205.1	1235.2	1236.7
42.5°	1071.4	1088.3	1124.3	1167.6	1167.6
45°	995.1	1011.9	1045.0	1092.7	1098.6
47.5°	920.2	937.8	970.1	1017.8	1027.4
50°	846.7	862.9	895.2	941.4	956.1
52.5°	770.3	788.0	819.5	862.1	883.4
55°	696.9	708.7	743.2	784.3	807.1
57.5°	620.5	631.5	670.5	705.7	729.2
60°	547.1	561.1	591.2	627.1	654.3
62.5°	476.6	491.3	517.0	548.6	579.4
65°	408.3	419.3	444.3	475.9	503.0
67.5°	342.2	351.8	376.7	398.8	427.4
70°	275.4	287.9	306.2	327.5	345.9
72.5°	221.8	226.9	242.3	257.8	276.9
75°	163.8	172.6	185.1	193.9	204.9
77.5°	117.5	122.6	130.0	137.3	147.6
80°	78.6	80.8	87.4	88.9	96.9
82.5°	47.7	49.2	50.7	51.4	54.3
85°	25.7	25.7	25.7	24.2	24.2
87.5°	14.7	14.7	12.5	10.3	7.3
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)