

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: P556769

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-93-84-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: P556769  
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-LD4-1STD-35-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

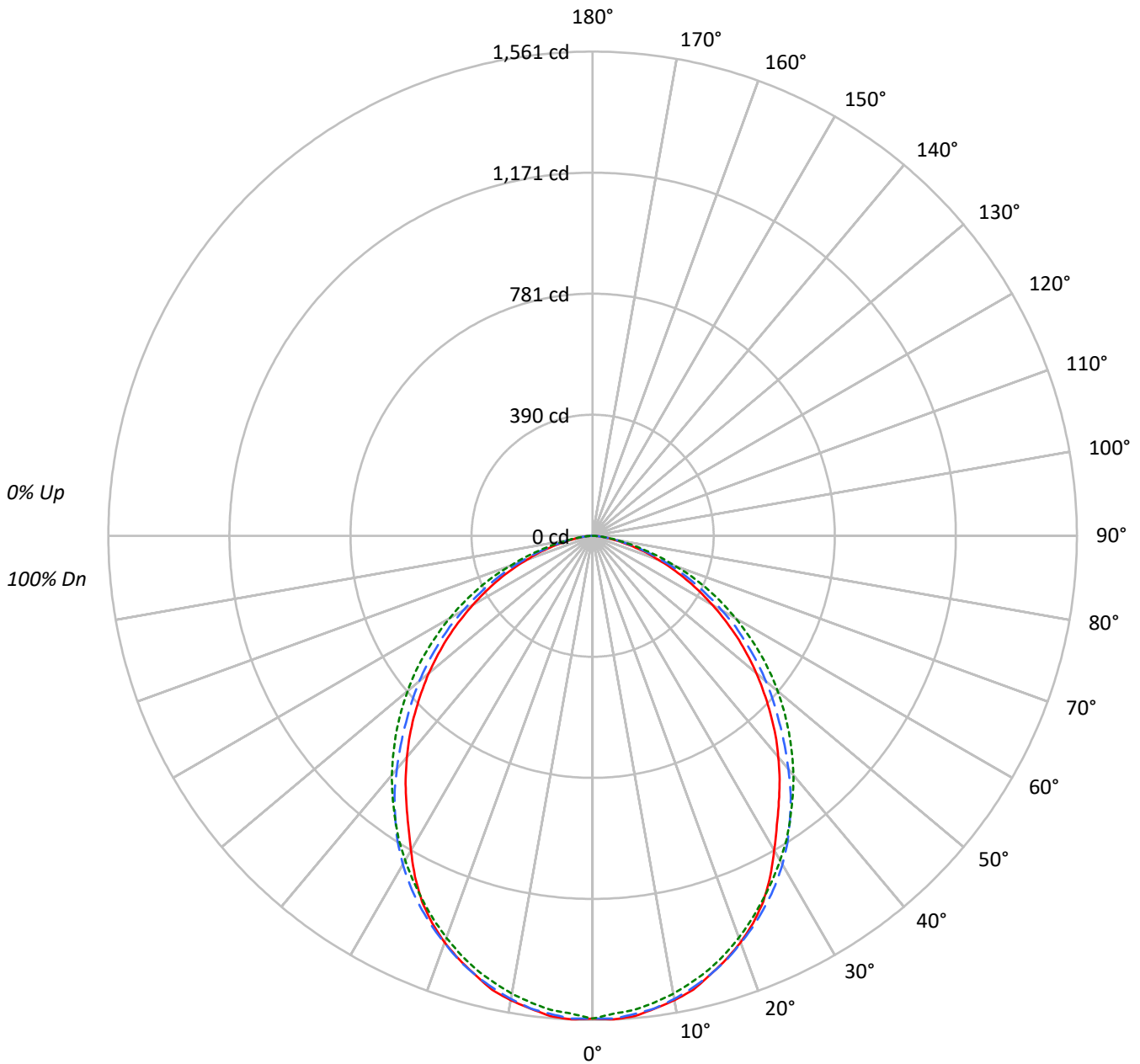
Lumens per Lamp: N/A  
Luminaire Lumens: 3599.0 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	4189	4189	4189
5°	4200	4182	4146
10°	4155	4144	4096
15°	4081	4081	4035
20°	3995	4000	3949
25°	3863	3911	3849
30°	3638	3801	3755
35°	3438	3644	3650
40°	3270	3447	3537
45°	3083	3238	3404
50°	2886	3051	3259
55°	2662	2839	3083
60°	2398	2591	2868
65°	2117	2304	2608
70°	1764	1961	2216
75°	1386	1567	1734
80°	992	1103	1223
85°	645	645	608



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.5	4.1
10°-20°	411.7	11.4
20°-30°	601.6	16.7
30°-40°	682.9	19.0
40°-50°	659.2	18.3
50°-60°	543.8	15.1
60°-70°	362.1	10.1
70°-80°	162.1	4.5
80°-90°	29.0	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°	1159.9	32.2
0°-40°	1842.8	51.2
0°-60°	3045.8	84.6
0°-90°	3599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3599.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1555	1554	1548	1540	1535	147
15°	1465	1469	1465	1458	1448	413
25°	1301	1311	1317	1308	1296	596
35°	1046	1061	1109	1115	1111	656
45°	810	824	851	890	894	625
55°	568	577	605	639	657	506
65°	332	341	362	388	410	330
75°	133	140	151	158	167	146
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1560.7	1561.3	1557.7	1548.1	1542.1
5°	1554.7	1554.1	1548.1	1539.7	1534.9
7.5°	1537.3	1538.5	1536.7	1524.8	1518.2
10°	1520.6	1521.2	1516.4	1506.8	1499.1
12.5°	1499.1	1498.5	1491.9	1487.1	1474.6
15°	1465.0	1468.6	1465.0	1458.4	1448.2
17.5°	1432.1	1432.1	1434.5	1423.1	1415.4
20°	1395.0	1396.8	1396.8	1387.9	1378.9
22.5°	1352.0	1357.4	1359.1	1349.6	1338.8
25°	1301.1	1311.3	1317.3	1307.7	1296.4
27.5°	1239.6	1255.1	1273.0	1265.9	1253.3
30°	1170.8	1193.5	1223.4	1217.4	1208.5
32.5°	1105.6	1128.3	1169.6	1167.2	1162.4
35°	1046.4	1060.8	1109.2	1115.2	1111.0
37.5°	990.2	1003.4	1048.8	1062.6	1059.0
40°	931.0	945.4	981.2	1005.8	1007.0
42.5°	872.4	886.2	915.5	950.7	950.7
45°	810.2	824.0	850.9	889.8	894.5
47.5°	749.2	763.6	789.9	828.8	836.5
50°	689.4	702.6	728.9	766.6	778.5
52.5°	627.3	641.6	667.3	702.0	719.3
55°	567.5	577.0	605.1	638.6	657.2
57.5°	505.3	514.2	545.9	574.6	593.8
60°	445.5	456.8	481.4	510.7	532.8
62.5°	388.1	400.0	421.0	446.7	471.8
65°	332.5	341.4	361.8	387.5	409.6
67.5°	278.6	286.4	306.8	324.7	348.0
70°	224.2	234.4	249.3	266.7	281.6
72.5°	180.6	184.8	197.3	209.9	225.4
75°	133.3	140.5	150.7	157.9	166.8
77.5°	95.7	99.9	105.8	111.8	120.2
80°	64.0	65.8	71.2	72.4	78.9
82.5°	38.9	40.1	41.3	41.9	44.2
85°	20.9	20.9	20.9	19.7	19.7
87.5°	12.0	12.0	10.2	8.4	6.0
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)