

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: P556201

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-88-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: P556201  
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-30-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

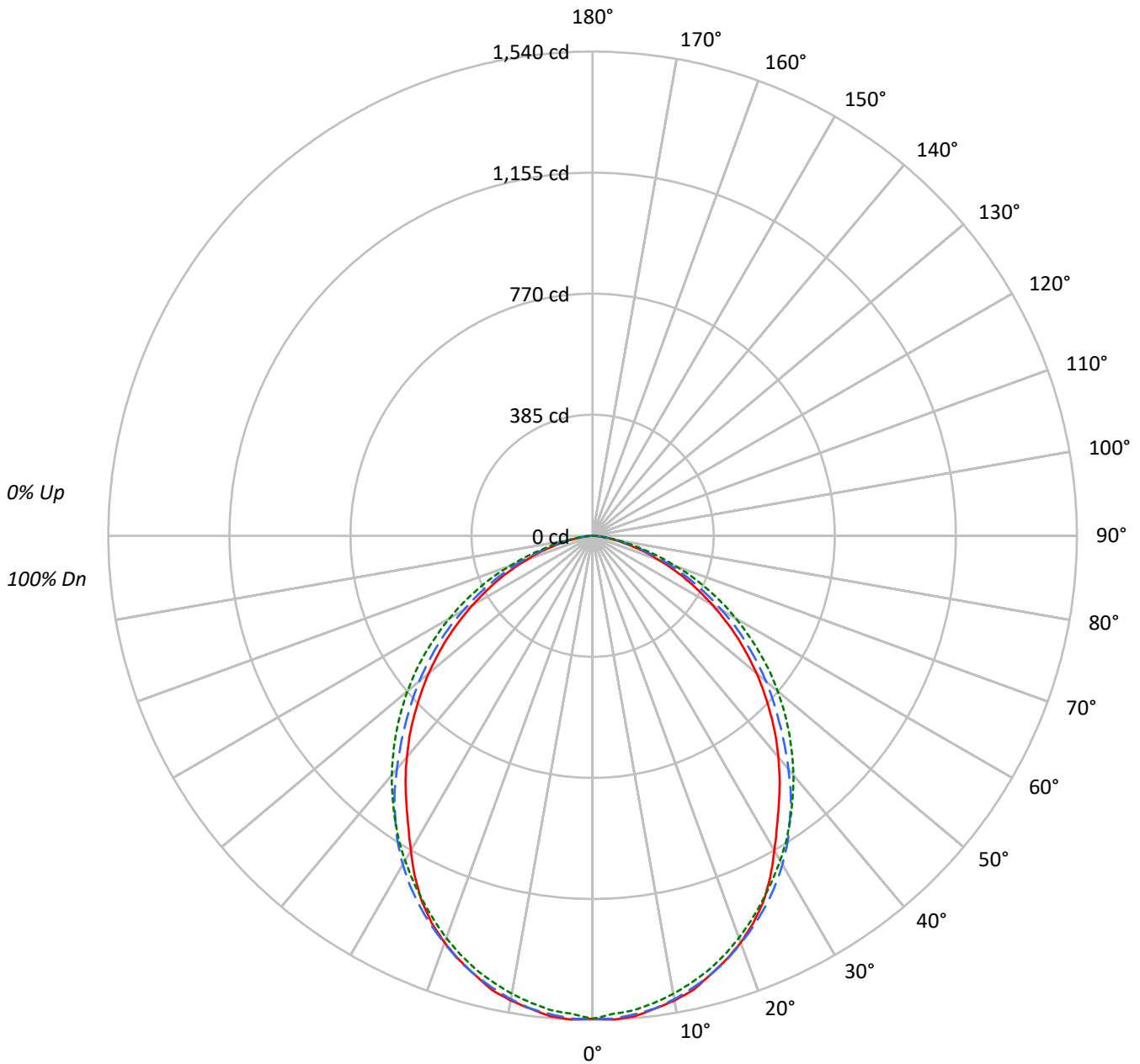
Lumens per Lamp: N/A  
Luminaire Lumens: 3552.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4134	4134	4134
5°	4145	4127	4092
10°	4101	4089	4043
15°	4028	4028	3982
20°	3943	3948	3897
25°	3813	3860	3799
30°	3590	3752	3706
35°	3393	3596	3602
40°	3228	3402	3491
45°	3043	3196	3360
50°	2848	3012	3217
55°	2627	2802	3043
60°	2366	2557	2830
65°	2089	2273	2574
70°	1741	1936	2187
75°	1368	1546	1712
80°	978	1088	1207
85°	639	639	602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.6	4.1
10°-20°	406.3	11.4
20°-30°	593.8	16.7
30°-40°	674.0	19.0
40°-50°	650.6	18.3
50°-60°	536.7	15.1
60°-70°	357.4	10.1
70°-80°	159.9	4.5
80°-90°	28.6	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°	1144.7	32.2
0°-40°	1818.7	51.2
0°-60°	3006.0	84.6
0°-90°	3552.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3552.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1534	1534	1528	1520	1515	145
15°	1446	1449	1446	1439	1429	408
25°	1284	1294	1300	1291	1279	588
35°	1033	1047	1095	1101	1096	647
45°	800	813	840	878	883	617
55°	560	570	597	630	649	500
65°	328	337	357	382	404	325
75°	132	139	149	156	165	144
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°	1536.1	1536.1	1536.1	1536.1	1536.1
2.5°	1540.3	1540.9	1537.3	1527.9	1522.0
5°	1534.4	1533.8	1527.9	1519.6	1514.9
7.5°	1517.3	1518.4	1516.7	1504.9	1498.4
10°	1500.7	1501.3	1496.6	1487.2	1479.5
12.5°	1479.5	1478.9	1472.4	1467.7	1455.3
15°	1445.9	1449.4	1445.9	1439.4	1429.3
17.5°	1413.4	1413.4	1415.8	1404.5	1396.9
20°	1376.8	1378.6	1378.6	1369.7	1360.9
22.5°	1334.3	1339.6	1341.4	1332.0	1321.3
25°	1284.2	1294.2	1300.1	1290.6	1279.4
27.5°	1223.4	1238.7	1256.4	1249.3	1236.9
30°	1155.5	1177.9	1207.4	1201.5	1192.7
32.5°	1091.2	1113.6	1154.3	1152.0	1147.2
35°	1032.8	1046.9	1094.7	1100.6	1096.5
37.5°	977.3	990.3	1035.1	1048.7	1045.1
40°	918.9	933.0	968.4	992.6	993.8
42.5°	861.0	874.6	903.5	938.3	938.3
45°	799.6	813.2	839.8	878.1	882.9
47.5°	739.5	753.6	779.6	817.9	825.6
50°	680.4	693.4	719.4	756.6	768.4
52.5°	619.1	633.2	658.6	692.8	709.9
55°	560.0	569.5	597.2	630.3	648.6
57.5°	498.7	507.5	538.8	567.1	586.0
60°	439.7	450.9	475.1	504.0	525.8
62.5°	383.0	394.8	415.5	440.8	465.6
65°	328.1	337.0	357.0	382.4	404.2
67.5°	275.0	282.7	302.7	320.4	343.5
70°	221.3	231.3	246.1	263.2	278.0
72.5°	178.2	182.4	194.7	207.1	222.5
75°	131.6	138.7	148.7	155.8	164.7
77.5°	94.4	98.6	104.5	110.4	118.6
80°	63.1	64.9	70.2	71.4	77.9
82.5°	38.4	39.5	40.7	41.3	43.7
85°	20.7	20.7	20.7	19.5	19.5
87.5°	11.8	11.8	10.0	8.3	5.9
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)