

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: P556665

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-80-88-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: P556665  
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-30-UNV-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC 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**

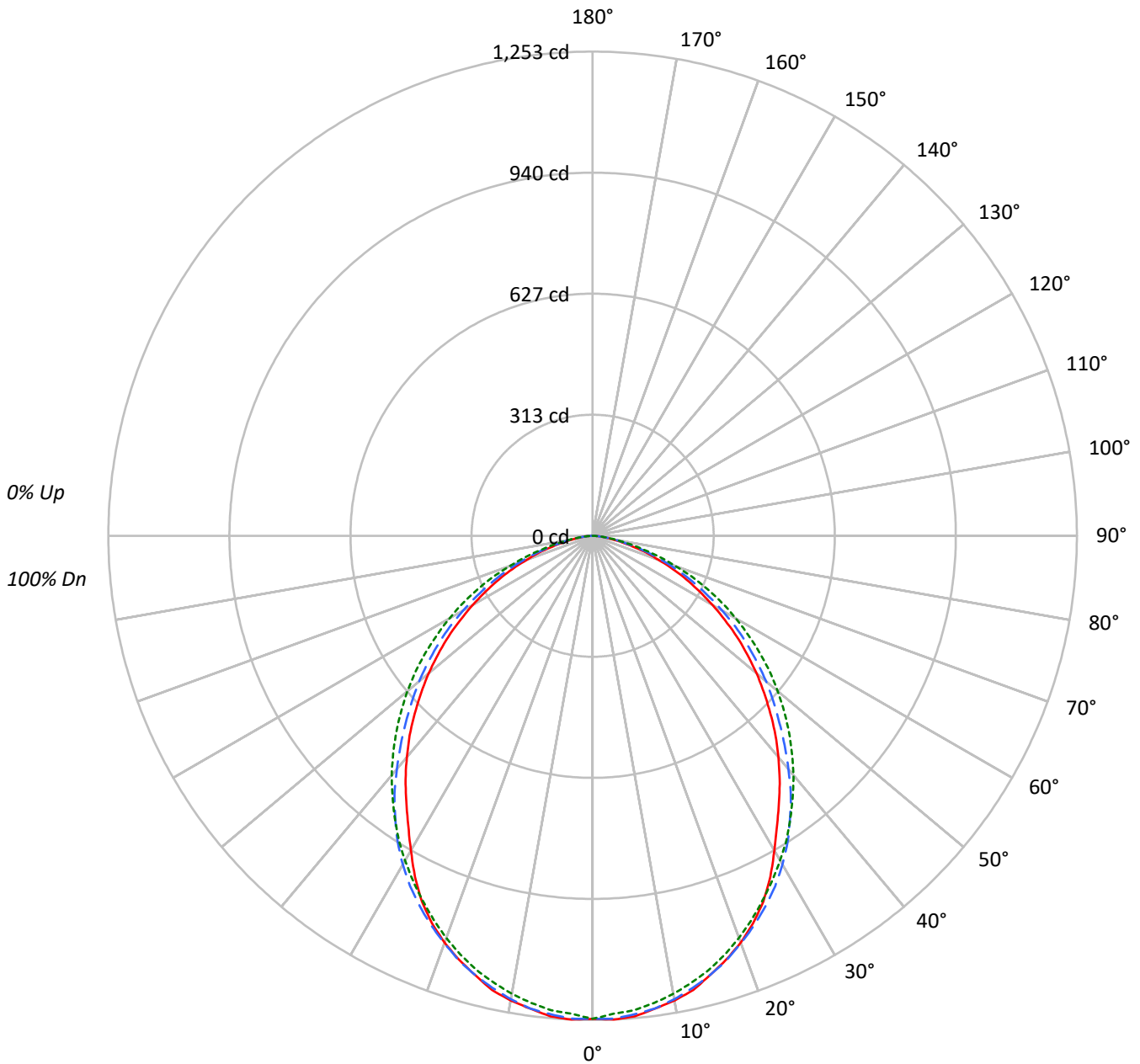
Lumens per Lamp: N/A  
Luminaire Lumens: 2890.0 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3363	3363	3363
5°	3372	3358	3330
10°	3336	3327	3289
15°	3277	3277	3240
20°	3208	3212	3171
25°	3102	3141	3091
30°	2921	3053	3015
35°	2760	2926	2931
40°	2626	2768	2840
45°	2476	2600	2734
50°	2318	2450	2617
55°	2138	2280	2476
60°	1925	2080	2302
65°	1700	1850	2094
70°	1417	1575	1780
75°	1114	1258	1393
80°	797	885	982
85°	519	519	488



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.7	4.1
10°-20°	330.6	11.4
20°-30°	483.1	16.7
30°-40°	548.4	19.0
40°-50°	529.4	18.3
50°-60°	436.7	15.1
60°-70°	290.8	10.1
70°-80°	130.1	4.5
80°-90°	23.3	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°	931.4	32.2
0°-40°	1479.7	51.2
0°-60°	2445.8	84.6
0°-90°	2890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2890.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1248	1248	1243	1236	1233	118
15°	1176	1179	1176	1171	1163	332
25°	1045	1053	1058	1050	1041	478
35°	840	852	891	896	892	526
45°	651	662	683	714	718	502
55°	456	463	486	513	528	407
65°	267	274	290	311	329	265
75°	107	113	121	127	134	117
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1249.9	1249.9	1249.9	1249.9	1249.9
2.5°	1253.2	1253.7	1250.8	1243.1	1238.3
5°	1248.4	1247.9	1243.1	1236.4	1232.6
7.5°	1234.5	1235.4	1234.0	1224.4	1219.1
10°	1221.0	1221.5	1217.7	1210.0	1203.8
12.5°	1203.8	1203.3	1198.0	1194.2	1184.1
15°	1176.4	1179.3	1176.4	1171.1	1162.9
17.5°	1150.0	1150.0	1151.9	1142.8	1136.5
20°	1120.2	1121.6	1121.6	1114.4	1107.2
22.5°	1085.6	1090.0	1091.4	1083.7	1075.1
25°	1044.8	1053.0	1057.8	1050.1	1041.0
27.5°	995.4	1007.9	1022.3	1016.5	1006.4
30°	940.1	958.4	982.4	977.6	970.4
32.5°	887.8	906.1	939.2	937.3	933.4
35°	840.3	851.8	890.7	895.5	892.1
37.5°	795.1	805.7	842.2	853.2	850.4
40°	747.6	759.1	787.9	807.6	808.6
42.5°	700.6	711.6	735.1	763.5	763.5
45°	650.6	661.7	683.3	714.5	718.3
47.5°	601.6	613.2	634.3	665.5	671.7
50°	553.6	564.2	585.3	615.6	625.2
52.5°	503.7	515.2	535.9	563.7	577.6
55°	455.7	463.4	485.9	512.8	527.7
57.5°	405.7	412.9	438.4	461.4	476.8
60°	357.7	366.8	386.5	410.1	427.8
62.5°	311.6	321.2	338.0	358.7	378.8
65°	267.0	274.2	290.5	311.1	328.9
67.5°	223.8	230.0	246.3	260.7	279.5
70°	180.1	188.2	200.2	214.2	226.2
72.5°	145.0	148.4	158.5	168.5	181.0
75°	107.1	112.8	121.0	126.8	134.0
77.5°	76.8	80.2	85.0	89.8	96.5
80°	51.4	52.8	57.1	58.1	63.4
82.5°	31.2	32.2	33.1	33.6	35.5
85°	16.8	16.8	16.8	15.8	15.8
87.5°	9.6	9.6	8.2	6.7	4.8
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)