

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: P556525

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-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: P556525  
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-LD4-1LO-35-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  
3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

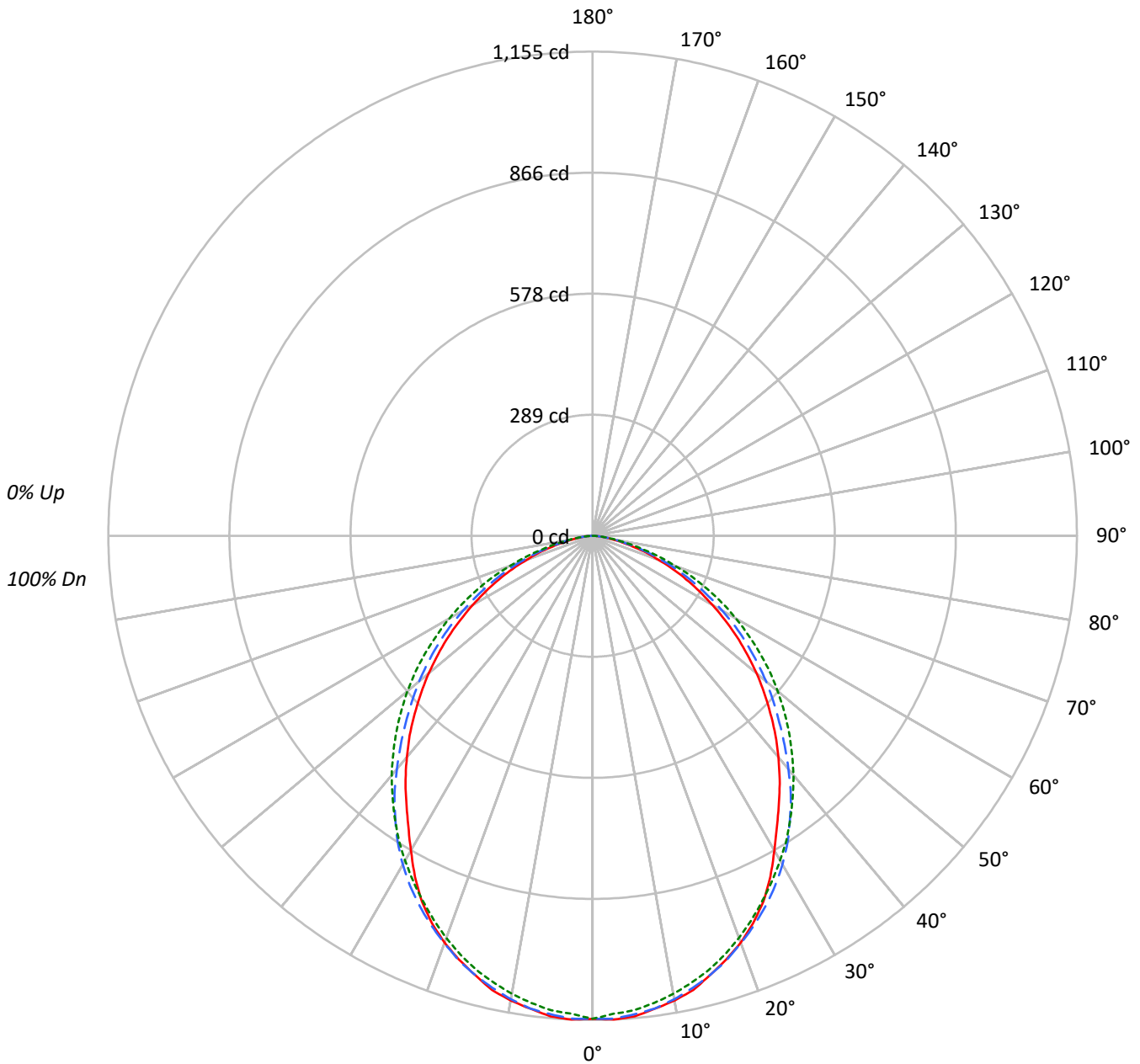
Lumens per Lamp: N/A  
Luminaire Lumens: 2664.0 lumens  
Efficiency: N/A  
Efficacy: 113.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (Ain): 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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3100	3100	3100
5°	3109	3095	3069
10°	3076	3067	3032
15°	3021	3021	2986
20°	2957	2961	2923
25°	2860	2895	2849
30°	2693	2814	2779
35°	2545	2697	2702
40°	2421	2551	2618
45°	2282	2397	2520
50°	2136	2259	2413
55°	1970	2101	2282
60°	1774	1918	2123
65°	1567	1705	1931
70°	1306	1452	1640
75°	1026	1159	1284
80°	735	817	905
85°	479	479	451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.5	4.1
10°-20°	304.7	11.4
20°-30°	445.3	16.7
30°-40°	505.5	19.0
40°-50°	488.0	18.3
50°-60°	402.5	15.1
60°-70°	268.1	10.1
70°-80°	120.0	4.5
80°-90°	21.5	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°	858.5	32.2
0°-40°	1364.0	51.2
0°-60°	2254.5	84.6
0°-90°	2664.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2664.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1152	1152	1152	1152	1152	
5°	1151	1150	1146	1140	1136	109
15°	1084	1087	1084	1080	1072	306
25°	963	971	975	968	960	441
35°	775	785	821	826	822	485
45°	600	610	630	659	662	463
55°	420	427	448	473	486	375
65°	246	253	268	287	303	244
75°	99	104	112	117	124	108
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1152.1	1152.1	1152.1	1152.1	1152.1
2.5°	1155.2	1155.7	1153.0	1145.9	1141.5
5°	1150.8	1150.3	1145.9	1139.7	1136.2
7.5°	1137.9	1138.8	1137.5	1128.7	1123.8
10°	1125.6	1126.0	1122.5	1115.4	1109.6
12.5°	1109.6	1109.2	1104.3	1100.8	1091.5
15°	1084.4	1087.0	1084.4	1079.5	1072.0
17.5°	1060.0	1060.0	1061.8	1053.4	1047.7
20°	1032.6	1033.9	1033.9	1027.3	1020.7
22.5°	1000.7	1004.7	1006.1	999.0	991.0
25°	963.1	970.6	975.1	968.0	959.6
27.5°	917.5	929.0	942.3	937.0	927.7
30°	866.6	883.4	905.6	901.2	894.5
32.5°	818.4	835.2	865.7	864.0	860.4
35°	774.6	785.2	821.0	825.5	822.4
37.5°	733.0	742.7	776.3	786.5	783.9
40°	689.1	699.8	726.3	744.5	745.4
42.5°	645.8	655.9	677.6	703.7	703.7
45°	599.7	609.9	629.8	658.6	662.1
47.5°	554.6	565.2	584.7	613.5	619.2
50°	510.3	520.1	539.5	567.4	576.3
52.5°	464.3	474.9	494.0	519.6	532.5
55°	420.0	427.1	447.9	472.7	486.4
57.5°	374.0	380.6	404.1	425.3	439.5
60°	329.7	338.2	356.3	378.0	394.4
62.5°	287.3	296.1	311.6	330.6	349.2
65°	246.1	252.7	267.8	286.8	303.2
67.5°	206.3	212.0	227.1	240.3	257.6
70°	166.0	173.5	184.6	197.4	208.5
72.5°	133.7	136.8	146.1	155.4	166.9
75°	98.7	104.0	111.5	116.8	123.5
77.5°	70.8	73.9	78.3	82.8	89.0
80°	47.4	48.7	52.7	53.6	58.4
82.5°	28.8	29.7	30.5	31.0	32.8
85°	15.5	15.5	15.5	14.6	14.6
87.5°	8.9	8.9	7.5	6.2	4.4
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)