

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: P556812

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-81-96-EDD-90**

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: P556812  
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-40-UNV-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

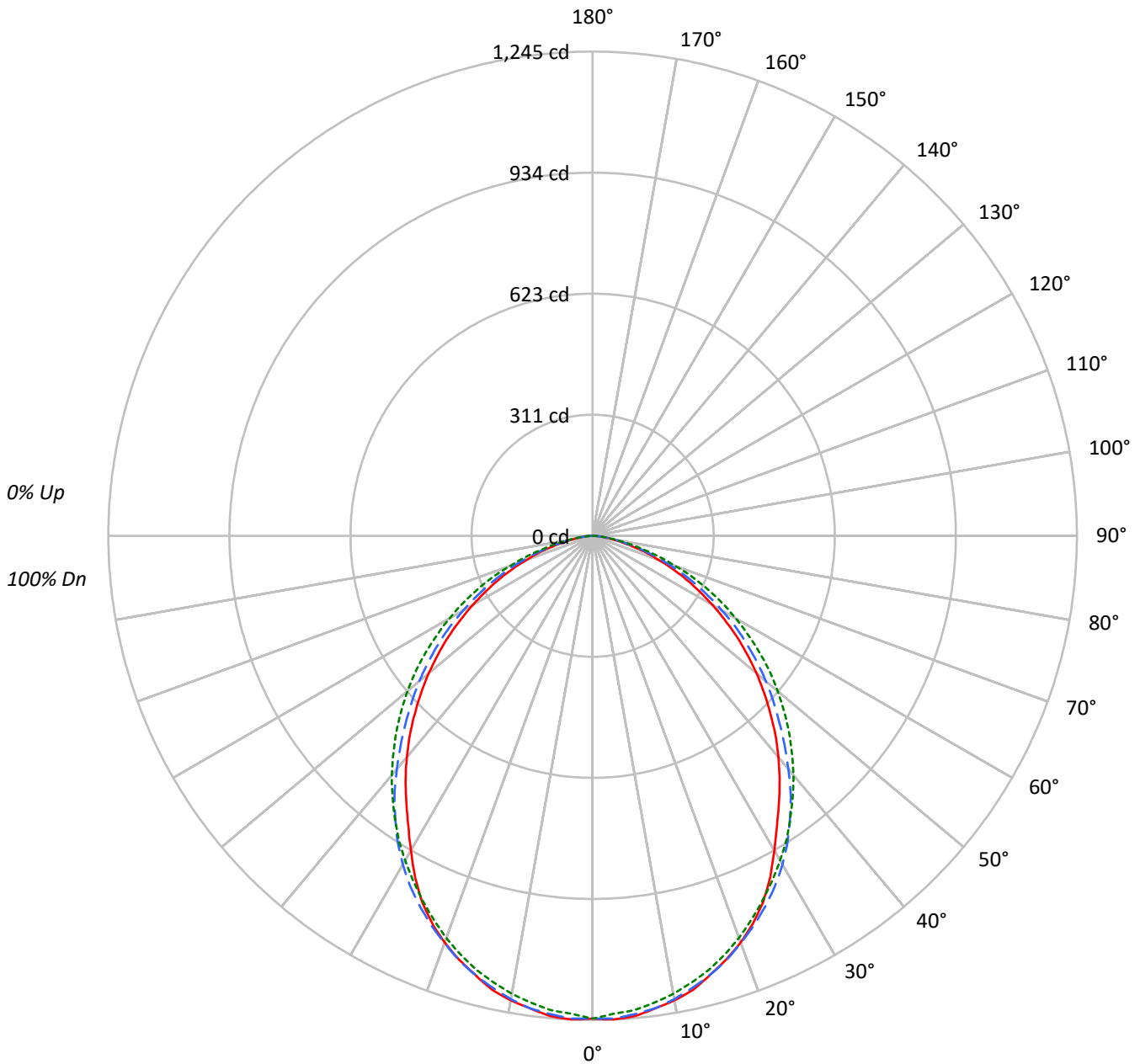
Lumens per Lamp: N/A  
Luminaire Lumens: 2871.0 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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									
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°	3341	3341	3341
5°	3350	3336	3308
10°	3315	3305	3268
15°	3256	3256	3219
20°	3187	3191	3150
25°	3082	3120	3070
30°	2902	3032	2995
35°	2742	2907	2912
40°	2609	2750	2822
45°	2460	2583	2716
50°	2303	2434	2600
55°	2124	2265	2459
60°	1913	2067	2287
65°	1689	1838	2080
70°	1408	1565	1768
75°	1106	1250	1384
80°	790	880	976
85°	516	516	485



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.9	4.1
10°-20°	328.4	11.4
20°-30°	479.9	16.7
30°-40°	544.8	19.0
40°-50°	525.9	18.3
50°-60°	433.8	15.1
60°-70°	288.9	10.1
70°-80°	129.3	4.5
80°-90°	23.1	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°	925.2	32.2
0°-40°	1470.0	51.2
0°-60°	2429.7	84.6
0°-90°	2871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2871.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1240	1240	1235	1228	1224	117
15°	1169	1172	1169	1163	1155	329
25°	1038	1046	1051	1043	1034	475
35°	835	846	885	890	886	523
45°	646	657	679	710	714	499
55°	453	460	483	509	524	404
65°	265	272	289	309	327	263
75°	106	112	120	126	133	116
85°	17	17	17	16	16	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1241.6	1241.6	1241.6	1241.6	1241.6
2.5°	1245.0	1245.4	1242.6	1235.0	1230.2
5°	1240.2	1239.7	1235.0	1228.3	1224.5
7.5°	1226.4	1227.3	1225.9	1216.4	1211.1
10°	1213.0	1213.5	1209.7	1202.0	1195.8
12.5°	1195.8	1195.4	1190.1	1186.3	1176.3
15°	1168.7	1171.5	1168.7	1163.4	1155.3
17.5°	1142.4	1142.4	1144.3	1135.3	1129.1
20°	1112.8	1114.3	1114.3	1107.1	1100.0
22.5°	1078.5	1082.8	1084.2	1076.6	1068.0
25°	1038.0	1046.1	1050.8	1043.2	1034.1
27.5°	988.8	1001.2	1015.5	1009.8	999.8
30°	934.0	952.1	975.9	971.2	964.0
32.5°	882.0	900.1	933.0	931.1	927.3
35°	834.8	846.2	884.8	889.6	886.3
37.5°	789.9	800.4	836.7	847.6	844.8
40°	742.7	754.1	782.8	802.3	803.3
42.5°	695.9	706.9	730.3	758.4	758.4
45°	646.3	657.3	678.8	709.8	713.6
47.5°	597.7	609.1	630.1	661.1	667.3
50°	550.0	560.5	581.5	611.5	621.1
52.5°	500.4	511.8	532.3	560.0	573.8
55°	452.7	460.3	482.7	509.4	524.2
57.5°	403.1	410.2	435.5	458.4	473.7
60°	355.4	364.4	384.0	407.4	425.0
62.5°	309.6	319.1	335.8	356.3	376.4
65°	265.2	272.4	288.6	309.1	326.7
67.5°	222.3	228.5	244.7	259.0	277.6
70°	178.9	187.0	198.9	212.7	224.7
72.5°	144.1	147.4	157.4	167.4	179.8
75°	106.4	112.1	120.2	125.9	133.1
77.5°	76.3	79.7	84.4	89.2	95.9
80°	51.0	52.5	56.8	57.7	63.0
82.5°	31.0	32.0	32.9	33.4	35.3
85°	16.7	16.7	16.7	15.7	15.7
87.5°	9.5	9.5	8.1	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)