

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: P556847

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-97-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: P556847  
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-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE  
AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND  
4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

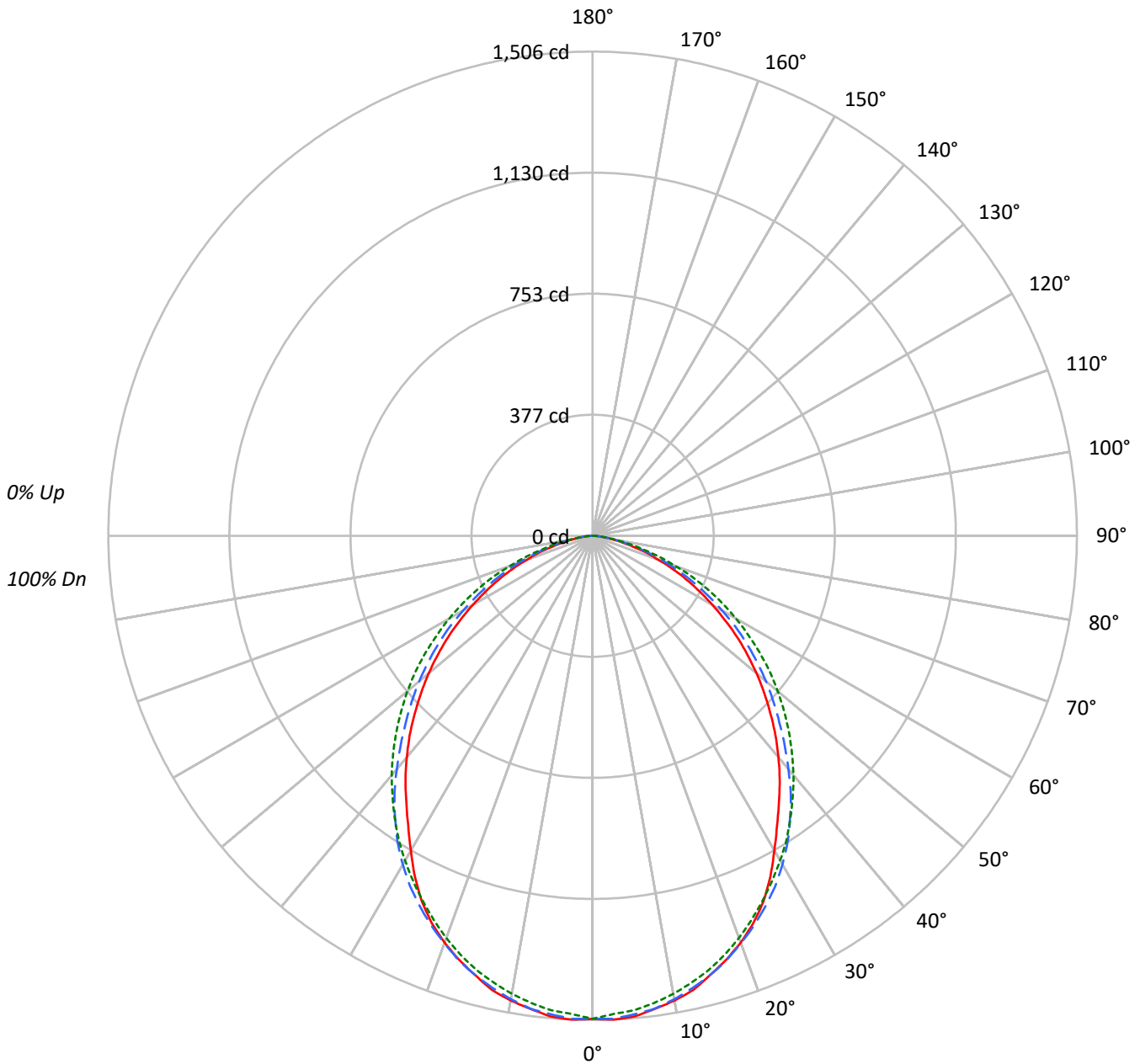
Lumens per Lamp: N/A  
Luminaire Lumens: 3474.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4043	4043	4043
5°	4054	4036	4002
10°	4011	4000	3954
15°	3940	3940	3894
20°	3856	3861	3812
25°	3729	3775	3715
30°	3512	3669	3625
35°	3318	3517	3523
40°	3157	3327	3414
45°	2976	3126	3286
50°	2786	2946	3146
55°	2570	2740	2976
60°	2314	2500	2768
65°	2043	2223	2518
70°	1703	1894	2139
75°	1338	1513	1674
80°	958	1065	1181
85°	624	624	587



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.5	4.1
10°-20°	397.4	11.4
20°-30°	580.7	16.7
30°-40°	659.2	19.0
40°-50°	636.3	18.3
50°-60°	524.9	15.1
60°-70°	349.6	10.1
70°-80°	156.4	4.5
80°-90°	28.0	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°	1119.6	32.2
0°-40°	1778.8	51.2
0°-60°	2940.0	84.6
0°-90°	3474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3474.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1502	1502	1502	1502	1502	
5°	1501	1500	1494	1486	1482	142
15°	1414	1418	1414	1408	1398	399
25°	1256	1266	1272	1262	1251	575
35°	1010	1024	1071	1076	1072	633
45°	782	795	821	859	864	603
55°	548	557	584	616	634	489
65°	321	330	349	374	395	318
75°	129	136	146	152	161	141
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1502.4	1502.4	1502.4	1502.4	1502.4
2.5°	1506.5	1507.0	1503.6	1494.3	1488.6
5°	1500.7	1500.1	1494.3	1486.3	1481.6
7.5°	1483.9	1485.1	1483.4	1471.8	1465.5
10°	1467.8	1468.4	1463.7	1454.5	1447.0
12.5°	1447.0	1446.4	1440.1	1435.5	1423.3
15°	1414.1	1417.6	1414.1	1407.8	1397.9
17.5°	1382.4	1382.4	1384.7	1373.7	1366.2
20°	1346.6	1348.3	1348.3	1339.6	1331.0
22.5°	1305.0	1310.2	1311.9	1302.7	1292.3
25°	1256.0	1265.8	1271.5	1262.3	1251.3
27.5°	1196.5	1211.5	1228.8	1221.9	1209.8
30°	1130.1	1152.1	1180.9	1175.2	1166.5
32.5°	1067.2	1089.2	1129.0	1126.7	1122.0
35°	1010.1	1023.9	1070.7	1076.5	1072.4
37.5°	955.8	968.5	1012.4	1025.7	1022.2
40°	898.7	912.5	947.2	970.8	972.0
42.5°	842.1	855.4	883.7	917.7	917.7
45°	782.1	795.4	821.3	858.9	863.5
47.5°	723.2	737.1	762.5	800.0	807.5
50°	665.5	678.2	703.6	740.0	751.5
52.5°	605.5	619.3	644.1	677.6	694.4
55°	547.7	557.0	584.1	616.4	634.3
57.5°	487.7	496.4	527.0	554.7	573.1
60°	430.0	441.0	464.6	492.9	514.3
62.5°	374.6	386.1	406.3	431.2	455.4
65°	320.9	329.6	349.2	374.0	395.4
67.5°	269.0	276.5	296.1	313.4	335.9
70°	216.4	226.3	240.7	257.4	271.9
72.5°	174.3	178.4	190.5	202.6	217.6
75°	128.7	135.6	145.5	152.4	161.0
77.5°	92.3	96.4	102.2	107.9	116.0
80°	61.8	63.5	68.7	69.8	76.2
82.5°	37.5	38.7	39.8	40.4	42.7
85°	20.2	20.2	20.2	19.0	19.0
87.5°	11.5	11.5	9.8	8.1	5.8
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)