

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: P556850

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-80-85-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: P556850  
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-50-UNV-80-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

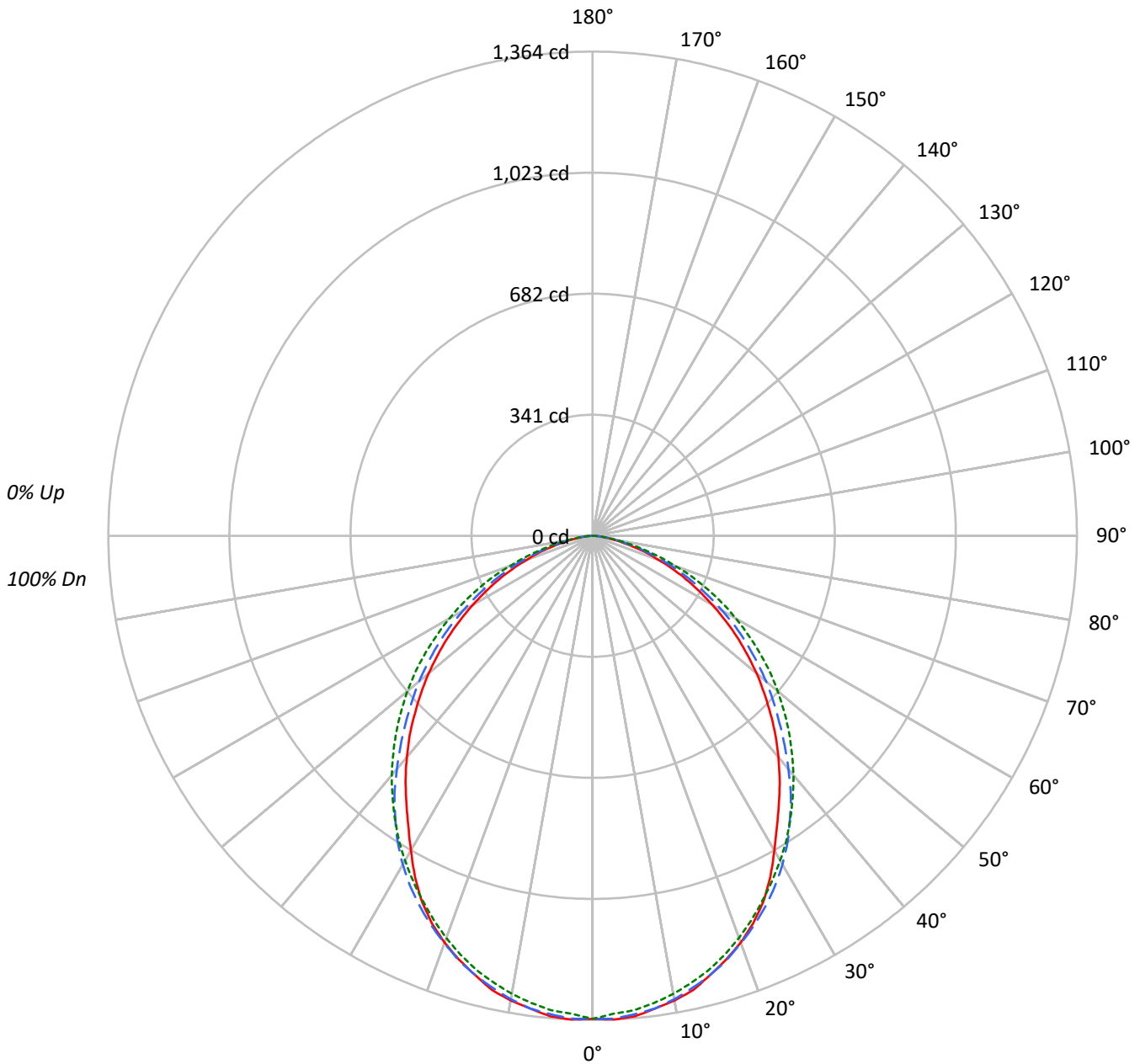
Lumens per Lamp: N/A  
Luminaire Lumens: 3146.0 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3661	3661	3661
5°	3671	3655	3624
10°	3632	3622	3581
15°	3568	3568	3527
20°	3492	3497	3452
25°	3377	3419	3365
30°	3180	3323	3283
35°	3005	3185	3190
40°	2859	3013	3092
45°	2695	2831	2976
50°	2523	2668	2849
55°	2327	2482	2695
60°	2096	2265	2506
65°	1850	2013	2280
70°	1542	1715	1937
75°	1212	1369	1516
80°	866	964	1069
85°	565	565	531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.1	4.1
10°-20°	359.9	11.4
20°-30°	525.9	16.7
30°-40°	596.9	19.0
40°-50°	576.3	18.3
50°-60°	475.4	15.1
60°-70°	316.6	10.1
70°-80°	141.7	4.5
80°-90°	25.3	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°	1013.9	32.2
0°-40°	1610.8	51.2
0°-60°	2662.4	84.6
0°-90°	3146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3146.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1361	1361	1361	1361	1361	
5°	1359	1358	1353	1346	1342	129
15°	1281	1284	1281	1275	1266	361
25°	1137	1146	1152	1143	1133	521
35°	915	927	970	975	971	573
45°	708	720	744	778	782	546
55°	496	504	529	558	574	443
65°	291	298	316	339	358	288
75°	117	123	132	138	146	127
85°	18	18	18	17	17	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1360.6	1360.6	1360.6	1360.6	1360.6
2.5°	1364.2	1364.7	1361.6	1353.2	1348.0
5°	1359.0	1358.5	1353.2	1345.9	1341.7
7.5°	1343.8	1344.9	1343.3	1332.9	1327.1
10°	1329.2	1329.7	1325.5	1317.2	1310.4
12.5°	1310.4	1309.9	1304.1	1299.9	1289.0
15°	1280.6	1283.7	1280.6	1274.8	1266.0
17.5°	1251.8	1251.8	1253.9	1244.0	1237.2
20°	1219.4	1221.0	1221.0	1213.2	1205.3
22.5°	1181.8	1186.5	1188.1	1179.7	1170.3
25°	1137.4	1146.3	1151.5	1143.1	1133.2
27.5°	1083.5	1097.1	1112.8	1106.5	1095.6
30°	1023.4	1043.3	1069.4	1064.2	1056.4
32.5°	966.5	986.3	1022.4	1020.3	1016.1
35°	914.7	927.3	969.6	974.8	971.2
37.5°	865.6	877.1	916.8	928.8	925.7
40°	813.8	826.4	857.7	879.2	880.2
42.5°	762.6	774.6	800.2	831.1	831.1
45°	708.2	720.3	743.8	777.8	781.9
47.5°	654.9	667.5	690.5	724.4	731.2
50°	602.7	614.2	637.2	670.1	680.5
52.5°	548.3	560.8	583.3	613.6	628.8
55°	496.0	504.4	529.0	558.2	574.4
57.5°	441.7	449.5	477.2	502.3	519.0
60°	389.4	399.3	420.8	446.4	465.7
62.5°	339.2	349.7	368.0	390.4	412.4
65°	290.6	298.5	316.2	338.7	358.0
67.5°	243.6	250.4	268.1	283.8	304.2
70°	196.0	204.9	218.0	233.1	246.2
72.5°	157.9	161.5	172.5	183.5	197.1
75°	116.6	122.8	131.7	138.0	145.8
77.5°	83.6	87.3	92.5	97.7	105.1
80°	55.9	57.5	62.2	63.2	69.0
82.5°	34.0	35.0	36.1	36.6	38.7
85°	18.3	18.3	18.3	17.2	17.2
87.5°	10.5	10.5	8.9	7.3	5.2
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)