

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: P556328

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-88-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: P556328  
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-LD4-1HI-40-UNV-93-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

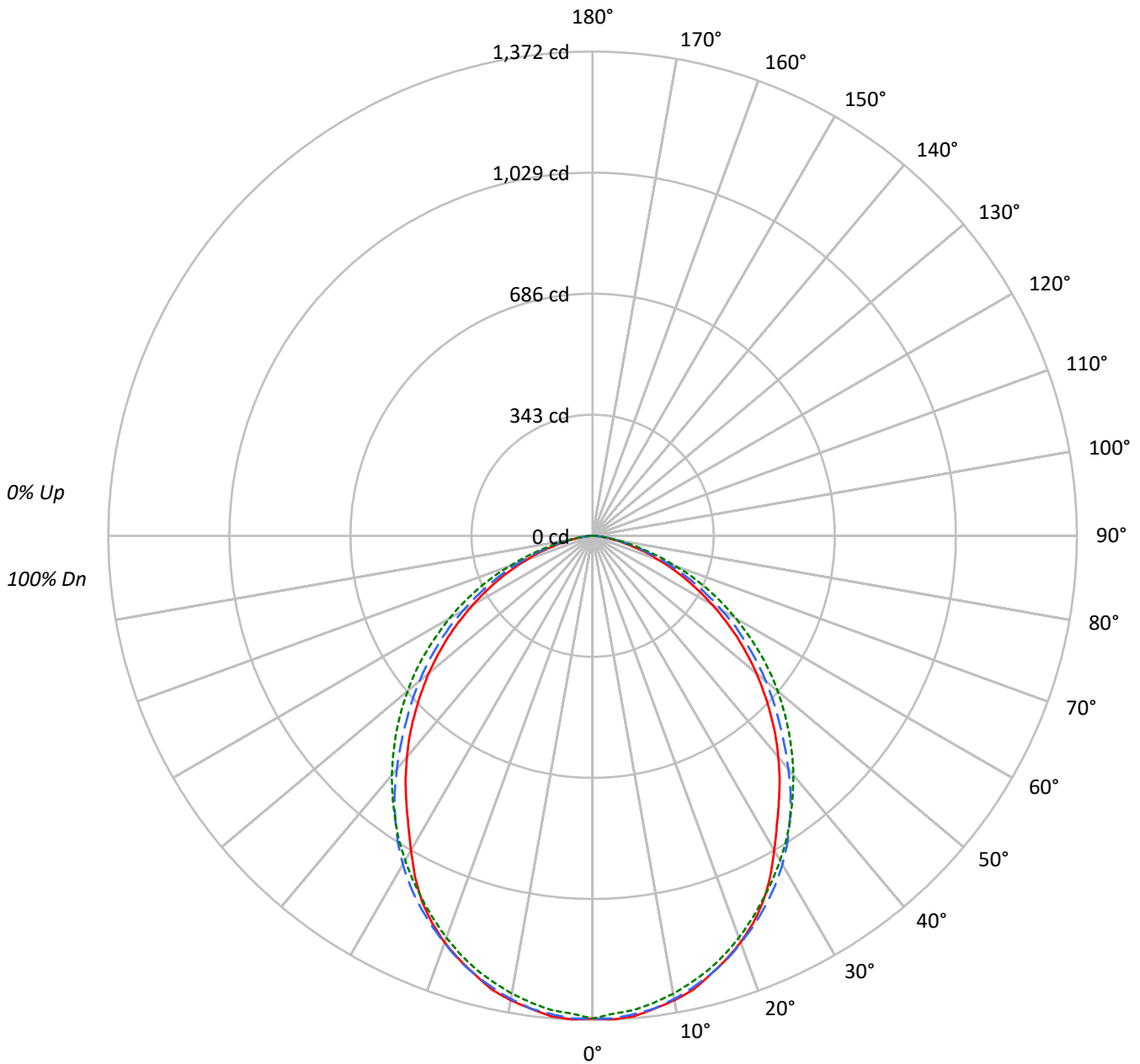
Lumens per Lamp: N/A  
Luminaire Lumens: 3163.0 lumens  
Efficiency: N/A  
Efficacy: 73.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	3681	3681	3681
5°	3691	3675	3644
10°	3652	3642	3600
15°	3587	3587	3546
20°	3511	3515	3470
25°	3395	3437	3383
30°	3197	3341	3300
35°	3021	3202	3208
40°	2874	3029	3109
45°	2710	2846	2992
50°	2537	2682	2864
55°	2340	2495	2709
60°	2107	2277	2520
65°	1861	2024	2292
70°	1551	1724	1947
75°	1219	1377	1524
80°	871	969	1075
85°	568	568	534



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.8	4.1
10°-20°	361.8	11.4
20°-30°	528.7	16.7
30°-40°	600.2	19.0
40°-50°	579.4	18.3
50°-60°	477.9	15.1
60°-70°	318.3	10.1
70°-80°	142.4	4.5
80°-90°	25.5	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°	1019.3	32.2
0°-40°	1619.5	51.2
0°-60°	2676.8	84.6
0°-90°	3163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3163.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1368	1368	1368	1368	1368	
5°	1366	1366	1361	1353	1349	129
15°	1288	1291	1288	1282	1273	363
25°	1144	1152	1158	1149	1139	524
35°	920	932	975	980	976	576
45°	712	724	748	782	786	549
55°	499	507	532	561	578	445
65°	292	300	318	340	360	290
75°	117	124	132	139	147	128
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°	1367.9	1367.9	1367.9	1367.9	1367.9
2.5°	1371.6	1372.1	1369.0	1360.6	1355.3
5°	1366.3	1365.8	1360.6	1353.2	1349.0
7.5°	1351.1	1352.2	1350.6	1340.1	1334.3
10°	1336.4	1336.9	1332.7	1324.3	1317.5
12.5°	1317.5	1316.9	1311.2	1307.0	1295.9
15°	1287.5	1290.7	1287.5	1281.7	1272.8
17.5°	1258.6	1258.6	1260.7	1250.7	1243.9
20°	1226.0	1227.6	1227.6	1219.7	1211.8
22.5°	1188.2	1192.9	1194.5	1186.1	1176.6
25°	1143.5	1152.5	1157.7	1149.3	1139.3
27.5°	1089.4	1103.1	1118.8	1112.5	1101.5
30°	1029.0	1048.9	1075.2	1069.9	1062.1
32.5°	971.7	991.6	1027.9	1025.8	1021.6
35°	919.7	932.3	974.8	980.1	976.4
37.5°	870.3	881.8	921.8	933.8	930.7
40°	818.2	830.8	862.4	883.9	885.0
42.5°	766.7	778.8	804.6	835.6	835.6
45°	712.1	724.2	747.8	782.0	786.2
47.5°	658.5	671.1	694.2	728.4	735.2
50°	605.9	617.5	640.6	673.7	684.2
52.5°	551.3	563.9	586.5	617.0	632.2
55°	498.7	507.1	531.8	561.3	577.5
57.5°	444.1	451.9	479.8	505.0	521.8
60°	391.5	401.5	423.0	448.8	468.2
62.5°	341.1	351.6	370.0	392.6	414.6
65°	292.2	300.1	317.9	340.5	360.0
67.5°	244.9	251.7	269.6	285.4	305.8
70°	197.1	206.0	219.1	234.4	247.5
72.5°	158.7	162.4	173.4	184.5	198.1
75°	117.2	123.5	132.4	138.7	146.6
77.5°	84.1	87.8	93.0	98.3	105.6
80°	56.2	57.8	62.5	63.6	69.4
82.5°	34.2	35.2	36.3	36.8	38.9
85°	18.4	18.4	18.4	17.3	17.3
87.5°	10.5	10.5	8.9	7.4	5.3
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)