

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: P556352

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-81-84-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: P556352  
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-50-UNV-81-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

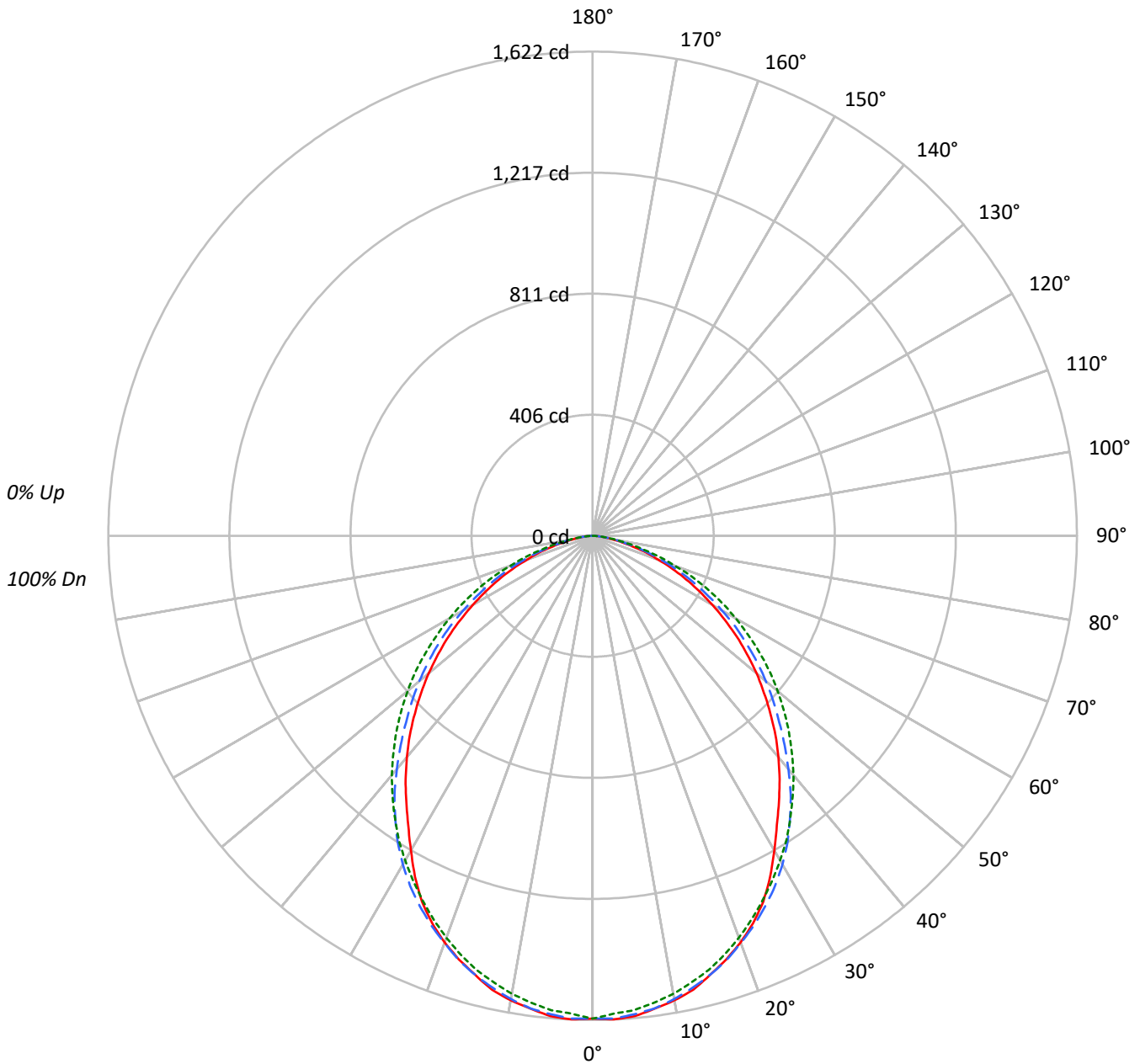
Lumens per Lamp: N/A  
Luminaire Lumens: 3740.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	4353	4353	4353
5°	4364	4346	4309
10°	4318	4306	4257
15°	4241	4241	4193
20°	4151	4157	4103
25°	4015	4064	4000
30°	3781	3950	3902
35°	3572	3787	3793
40°	3399	3582	3676
45°	3204	3365	3538
50°	3000	3171	3387
55°	2767	2950	3204
60°	2491	2692	2980
65°	2200	2394	2710
70°	1833	2039	2303
75°	1441	1628	1803
80°	1031	1145	1271
85°	670	670	633



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.3	4.1
10°-20°	427.8	11.4
20°-30°	625.2	16.7
30°-40°	709.7	19.0
40°-50°	685.1	18.3
50°-60°	565.1	15.1
60°-70°	376.3	10.1
70°-80°	168.4	4.5
80°-90°	30.1	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°	1205.3	32.2
0°-40°	1914.9	51.2
0°-60°	3165.1	84.6
0°-90°	3740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3740.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1618	1618	1618	1618	1618	
5°	1616	1615	1609	1600	1595	153
15°	1522	1526	1522	1516	1505	429
25°	1352	1363	1369	1359	1347	619
35°	1087	1102	1153	1159	1154	681
45°	842	856	884	925	930	650
55°	590	600	629	664	683	526
65°	346	355	376	403	426	343
75°	139	146	157	164	173	152
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1617.5	1617.5	1617.5	1617.5	1617.5
2.5°	1621.8	1622.4	1618.7	1608.8	1602.5
5°	1615.6	1615.0	1608.8	1600.1	1595.1
7.5°	1597.6	1598.8	1596.9	1584.5	1577.7
10°	1580.2	1580.8	1575.8	1565.9	1557.8
12.5°	1557.8	1557.2	1550.3	1545.4	1532.3
15°	1522.4	1526.1	1522.4	1515.5	1505.0
17.5°	1488.2	1488.2	1490.7	1478.9	1470.8
20°	1449.7	1451.5	1451.5	1442.2	1432.9
22.5°	1404.9	1410.5	1412.4	1402.5	1391.3
25°	1352.1	1362.7	1368.9	1359.0	1347.2
27.5°	1288.1	1304.3	1322.9	1315.5	1302.4
30°	1216.7	1240.3	1271.3	1265.1	1255.8
32.5°	1148.9	1172.5	1215.4	1212.9	1208.0
35°	1087.4	1102.3	1152.7	1158.9	1154.5
37.5°	1029.0	1042.7	1089.9	1104.2	1100.5
40°	967.5	982.4	1019.7	1045.2	1046.4
42.5°	906.6	920.9	951.3	988.0	988.0
45°	842.0	856.3	884.2	924.6	929.6
47.5°	778.6	793.5	820.8	861.2	869.3
50°	716.5	730.1	757.5	796.6	809.0
52.5°	651.8	666.7	693.5	729.5	747.5
55°	589.7	599.6	628.8	663.6	682.9
57.5°	525.1	534.4	567.3	597.1	617.0
60°	462.9	474.7	500.2	530.7	553.7
62.5°	403.3	415.7	437.5	464.2	490.3
65°	345.5	354.8	375.9	402.7	425.6
67.5°	289.6	297.6	318.8	337.4	361.6
70°	233.0	243.6	259.1	277.1	292.7
72.5°	187.7	192.0	205.1	218.1	234.3
75°	138.6	146.0	156.6	164.0	173.4
77.5°	99.4	103.8	110.0	116.2	124.9
80°	66.5	68.4	73.9	75.2	82.0
82.5°	40.4	41.6	42.9	43.5	46.0
85°	21.7	21.7	21.7	20.5	20.5
87.5°	12.4	12.4	10.6	8.7	6.2
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)