

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: P556167

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-87-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: P556167  
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-30-UNV-81-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

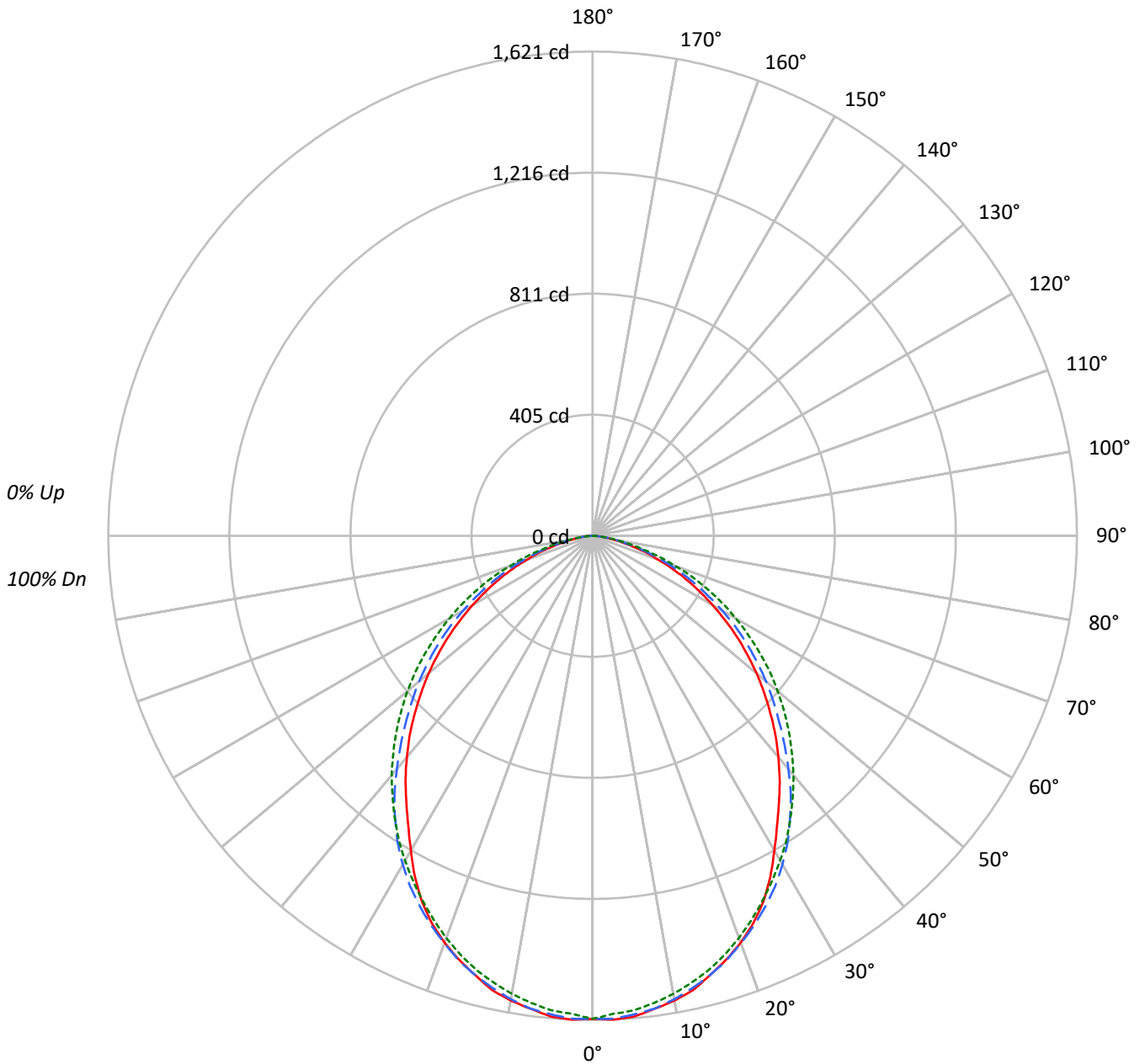
Lumens per Lamp: N/A  
Luminaire Lumens: 3739.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4351	4351	4351
5°	4363	4344	4308
10°	4317	4305	4256
15°	4240	4240	4192
20°	4150	4156	4102
25°	4014	4063	3999
30°	3779	3949	3901
35°	3571	3786	3792
40°	3398	3581	3675
45°	3203	3364	3537
50°	2999	3170	3386
55°	2766	2950	3203
60°	2491	2692	2979
65°	2199	2393	2709
70°	1833	2038	2302
75°	1440	1627	1802
80°	1031	1145	1271
85°	670	670	633



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.2	4.1
10°-20°	427.7	11.4
20°-30°	625.0	16.7
30°-40°	709.5	19.0
40°-50°	684.9	18.3
50°-60°	565.0	15.1
60°-70°	376.2	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°	1205.0	32.2
0°-40°	1914.4	51.2
0°-60°	3164.3	84.6
0°-90°	3739.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3739.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1617	1617	1617	1617	1617	
5°	1615	1614	1608	1600	1595	153
15°	1522	1526	1522	1515	1505	429
25°	1352	1362	1368	1359	1347	619
35°	1087	1102	1152	1159	1154	681
45°	842	856	884	924	929	649
55°	590	600	629	664	683	526
65°	345	355	376	402	426	342
75°	138	146	156	164	173	151
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°	1617.0	1617.0	1617.0	1617.0	1617.0
2.5°	1621.4	1622.0	1618.3	1608.3	1602.1
5°	1615.2	1614.5	1608.3	1599.6	1594.7
7.5°	1597.1	1598.4	1596.5	1584.1	1577.3
10°	1579.7	1580.4	1575.4	1565.5	1557.4
12.5°	1557.4	1556.8	1549.9	1545.0	1531.9
15°	1522.0	1525.7	1522.0	1515.1	1504.6
17.5°	1487.8	1487.8	1490.3	1478.5	1470.4
20°	1449.3	1451.2	1451.2	1441.8	1432.5
22.5°	1404.6	1410.2	1412.0	1402.1	1390.9
25°	1351.8	1362.3	1368.5	1358.6	1346.8
27.5°	1287.8	1303.9	1322.6	1315.1	1302.1
30°	1216.3	1239.9	1271.0	1264.8	1255.5
32.5°	1148.6	1172.2	1215.1	1212.6	1207.6
35°	1087.1	1102.0	1152.4	1158.6	1154.2
37.5°	1028.7	1042.4	1089.6	1103.9	1100.2
40°	967.2	982.1	1019.4	1044.9	1046.1
42.5°	906.4	920.6	951.1	987.7	987.7
45°	841.7	856.0	884.0	924.4	929.3
47.5°	778.4	793.3	820.6	861.0	869.1
50°	716.3	729.9	757.3	796.4	808.8
52.5°	651.7	666.6	693.3	729.3	747.3
55°	589.5	599.5	628.7	663.5	682.7
57.5°	524.9	534.2	567.2	597.0	616.9
60°	462.8	474.6	500.1	530.5	553.5
62.5°	403.2	415.6	437.3	464.0	490.1
65°	345.4	354.7	375.8	402.5	425.5
67.5°	289.5	297.6	318.7	337.3	361.5
70°	233.0	243.5	259.0	277.1	292.6
72.5°	187.6	192.0	205.0	218.0	234.2
75°	138.5	146.0	156.5	164.0	173.3
77.5°	99.4	103.7	110.0	116.2	124.9
80°	66.5	68.3	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)