

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: P554821

Luminaire Tested: **FUSL-12-2-LD4-2HI-50-UNV-81-86-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: P554821  
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-12-2-LD4-2HI-50-UNV-81-86-EDD  
Description: 2FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

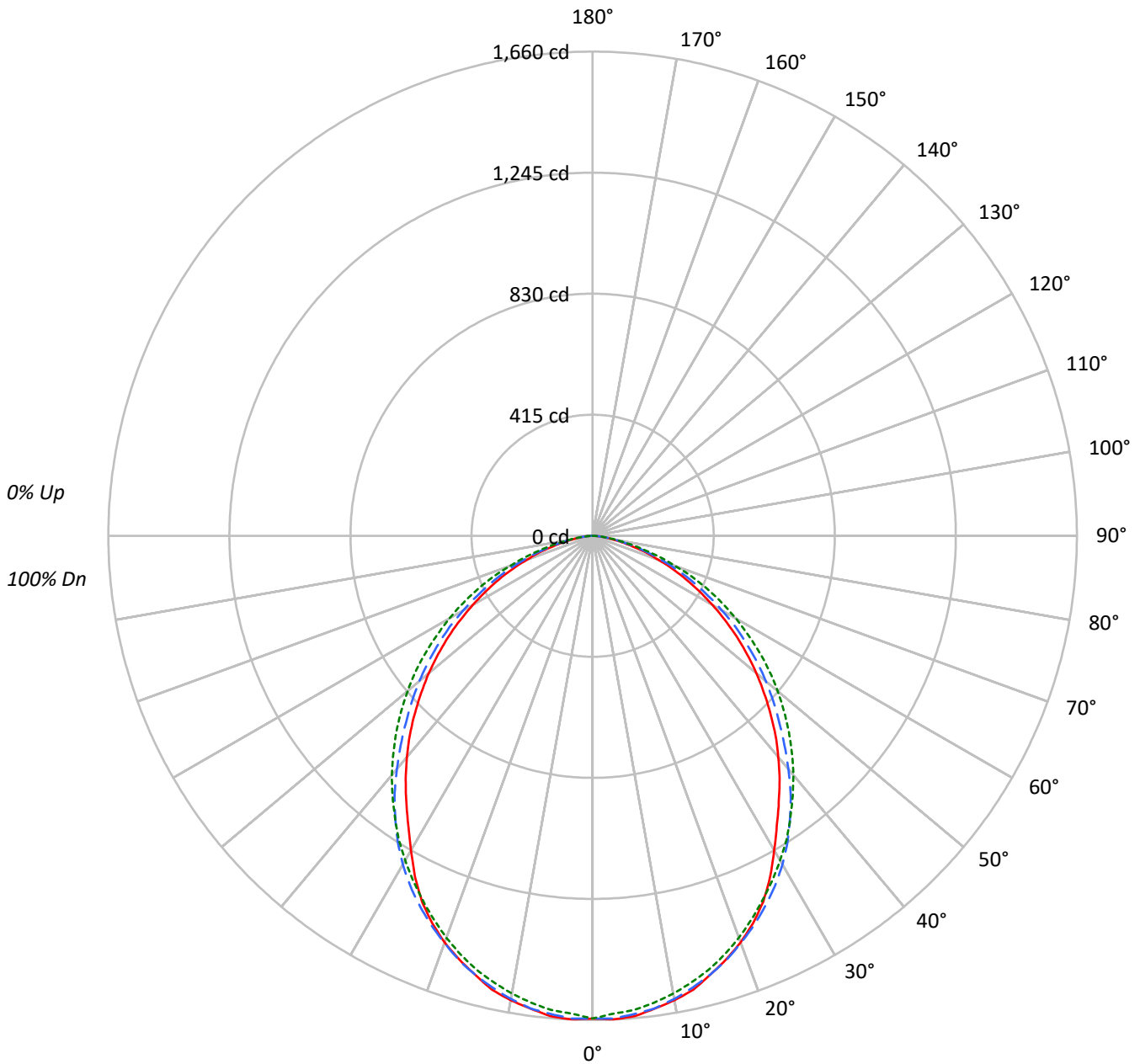
Lumens per Lamp: N/A  
Luminaire Lumens: 3827.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	8908	8908	8908
5°	8931	8894	8818
10°	8836	8812	8711
15°	8680	8680	8581
20°	8496	8507	8397
25°	8216	8318	8186
30°	7737	8085	7986
35°	7311	7750	7762
40°	6955	7331	7522
45°	6558	6887	7240
50°	6138	6490	6932
55°	5662	6038	6557
60°	5099	5509	6098
65°	4502	4899	5546
70°	3751	4172	4713
75°	2949	3331	3689
80°	2108	2346	2600
85°	1377	1377	1297



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.8	4.1
10°-20°	437.8	11.4
20°-30°	639.7	16.7
30°-40°	726.2	19.0
40°-50°	701.0	18.3
50°-60°	578.3	15.1
60°-70°	385.1	10.1
70°-80°	172.3	4.5
80°-90°	30.8	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°	1233.3	32.2
0°-40°	1959.5	51.2
0°-60°	3238.8	84.6
0°-90°	3827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3827.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1655	1655	1655	1655	1655	
5°	1653	1652	1646	1637	1632	156
15°	1558	1562	1558	1551	1540	439
25°	1384	1394	1401	1391	1378	634
35°	1113	1128	1180	1186	1181	697
45°	862	876	905	946	951	665
55°	603	614	644	679	699	539
65°	354	363	385	412	436	351
75°	142	149	160	168	177	155
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1655.1	1655.1	1655.1	1655.1	1655.1
2.5°	1659.5	1660.2	1656.4	1646.2	1639.8
5°	1653.2	1652.5	1646.2	1637.3	1632.2
7.5°	1634.7	1636.0	1634.1	1621.4	1614.4
10°	1616.9	1617.6	1612.5	1602.3	1594.0
12.5°	1594.0	1593.4	1586.4	1581.3	1568.0
15°	1557.8	1561.6	1557.8	1550.8	1540.0
17.5°	1522.8	1522.8	1525.4	1513.3	1505.0
20°	1483.4	1485.3	1485.3	1475.8	1466.2
22.5°	1437.6	1443.3	1445.3	1435.1	1423.6
25°	1383.6	1394.4	1400.7	1390.6	1378.5
27.5°	1318.1	1334.6	1353.7	1346.1	1332.7
30°	1245.0	1269.1	1300.9	1294.6	1285.0
32.5°	1175.7	1199.8	1243.7	1241.2	1236.1
35°	1112.7	1128.0	1179.5	1185.8	1181.4
37.5°	1052.9	1066.9	1115.3	1129.9	1126.1
40°	990.0	1005.3	1043.4	1069.5	1070.7
42.5°	927.7	942.3	973.5	1011.0	1011.0
45°	861.6	876.2	904.8	946.1	951.2
47.5°	796.7	812.0	839.9	881.3	889.5
50°	733.1	747.1	775.1	815.1	827.9
52.5°	667.0	682.3	709.6	746.5	764.9
55°	603.4	613.6	643.5	679.1	698.8
57.5°	537.3	546.8	580.5	611.0	631.4
60°	473.7	485.8	511.8	543.0	566.5
62.5°	412.7	425.4	447.6	475.0	501.7
65°	353.5	363.1	384.7	412.0	435.5
67.5°	296.3	304.6	326.2	345.3	370.1
70°	238.4	249.2	265.1	283.6	299.5
72.5°	192.0	196.5	209.8	223.2	239.7
75°	141.8	149.4	160.2	167.9	177.4
77.5°	101.7	106.2	112.5	118.9	127.8
80°	68.0	69.9	75.7	76.9	83.9
82.5°	41.3	42.6	43.9	44.5	47.1
85°	22.3	22.3	22.3	21.0	21.0
87.5°	12.7	12.7	10.8	8.9	6.4
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)