

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: P557323

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-94-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: P557323  
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-LD4-2LO-40-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

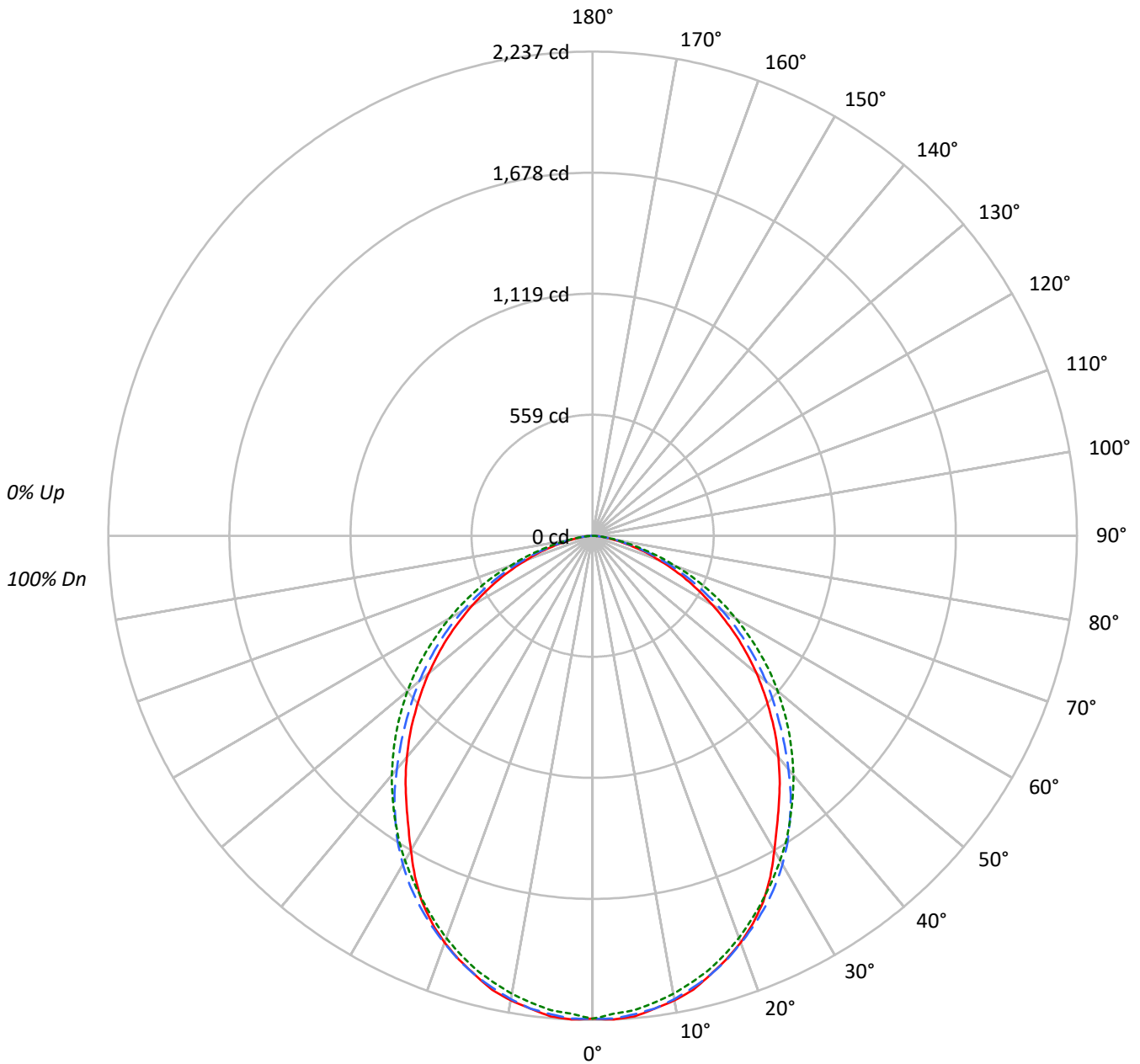
Lumens per Lamp: N/A  
Luminaire Lumens: 5159.0 lumens  
Efficiency: N/A  
Efficacy: 110.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	6004	6004	6004
5°	6020	5994	5944
10°	5956	5940	5872
15°	5850	5850	5784
20°	5727	5734	5660
25°	5538	5607	5518
30°	5215	5449	5383
35°	4928	5223	5232
40°	4688	4941	5070
45°	4420	4642	4880
50°	4137	4374	4672
55°	3816	4069	4419
60°	3437	3714	4110
65°	3035	3302	3738
70°	2529	2812	3176
75°	1987	2246	2486
80°	1421	1581	1753
85°	926	926	874



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.1	4.1
10°-20°	590.1	11.4
20°-30°	862.4	16.7
30°-40°	978.9	19.0
40°-50°	945.0	18.3
50°-60°	779.5	15.1
60°-70°	519.1	10.1
70°-80°	232.3	4.5
80°-90°	41.6	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°	1662.6	32.2
0°-40°	2641.5	51.2
0°-60°	4366.0	84.6
0°-90°	5159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5159.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2231	2231	2231	2231	2231	
5°	2229	2228	2219	2207	2200	211
15°	2100	2105	2100	2091	2076	592
25°	1865	1880	1888	1875	1858	854
35°	1500	1521	1590	1599	1593	940
45°	1161	1181	1220	1275	1282	896
55°	813	827	867	915	942	726
65°	477	489	519	555	587	473
75°	191	201	216	226	239	209
85°	30	30	30	28	28	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2231.1	2231.1	2231.1	2231.1	2231.1
2.5°	2237.1	2238.0	2232.8	2219.1	2210.6
5°	2228.6	2227.7	2219.1	2207.1	2200.3
7.5°	2203.7	2205.4	2202.8	2185.7	2176.3
10°	2179.7	2180.6	2173.7	2160.0	2148.8
12.5°	2148.8	2148.0	2138.6	2131.7	2113.7
15°	2100.0	2105.1	2100.0	2090.6	2076.0
17.5°	2052.8	2052.8	2056.3	2040.0	2028.8
20°	1999.7	2002.3	2002.3	1989.4	1976.6
22.5°	1938.0	1945.7	1948.3	1934.6	1919.1
25°	1865.1	1879.7	1888.3	1874.6	1858.3
27.5°	1776.9	1799.1	1824.9	1814.6	1796.6
30°	1678.3	1710.9	1753.7	1745.1	1732.3
32.5°	1584.9	1617.4	1676.6	1673.1	1666.3
35°	1500.0	1520.6	1590.0	1598.6	1592.6
37.5°	1419.4	1438.3	1503.4	1523.1	1518.0
40°	1334.6	1355.1	1406.6	1441.7	1443.4
42.5°	1250.6	1270.3	1312.3	1362.9	1362.9
45°	1161.4	1181.1	1219.7	1275.4	1282.3
47.5°	1074.0	1094.6	1132.3	1188.0	1199.1
50°	988.3	1007.1	1044.9	1098.9	1116.0
52.5°	899.1	919.7	956.6	1006.3	1031.1
55°	813.4	827.1	867.4	915.4	942.0
57.5°	724.3	737.1	782.6	823.7	851.1
60°	638.6	654.9	690.0	732.0	763.7
62.5°	556.3	573.4	603.4	640.3	676.3
65°	476.6	489.4	518.6	555.4	587.1
67.5°	399.4	410.6	439.7	465.4	498.9
70°	321.4	336.0	357.4	382.3	403.7
72.5°	258.9	264.9	282.9	300.9	323.1
75°	191.1	201.4	216.0	226.3	239.1
77.5°	137.1	143.1	151.7	160.3	172.3
80°	91.7	94.3	102.0	103.7	113.1
82.5°	55.7	57.4	59.1	60.0	63.4
85°	30.0	30.0	30.0	28.3	28.3
87.5°	17.1	17.1	14.6	12.0	8.6
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)