

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: P557327

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-97-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: P557327
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-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

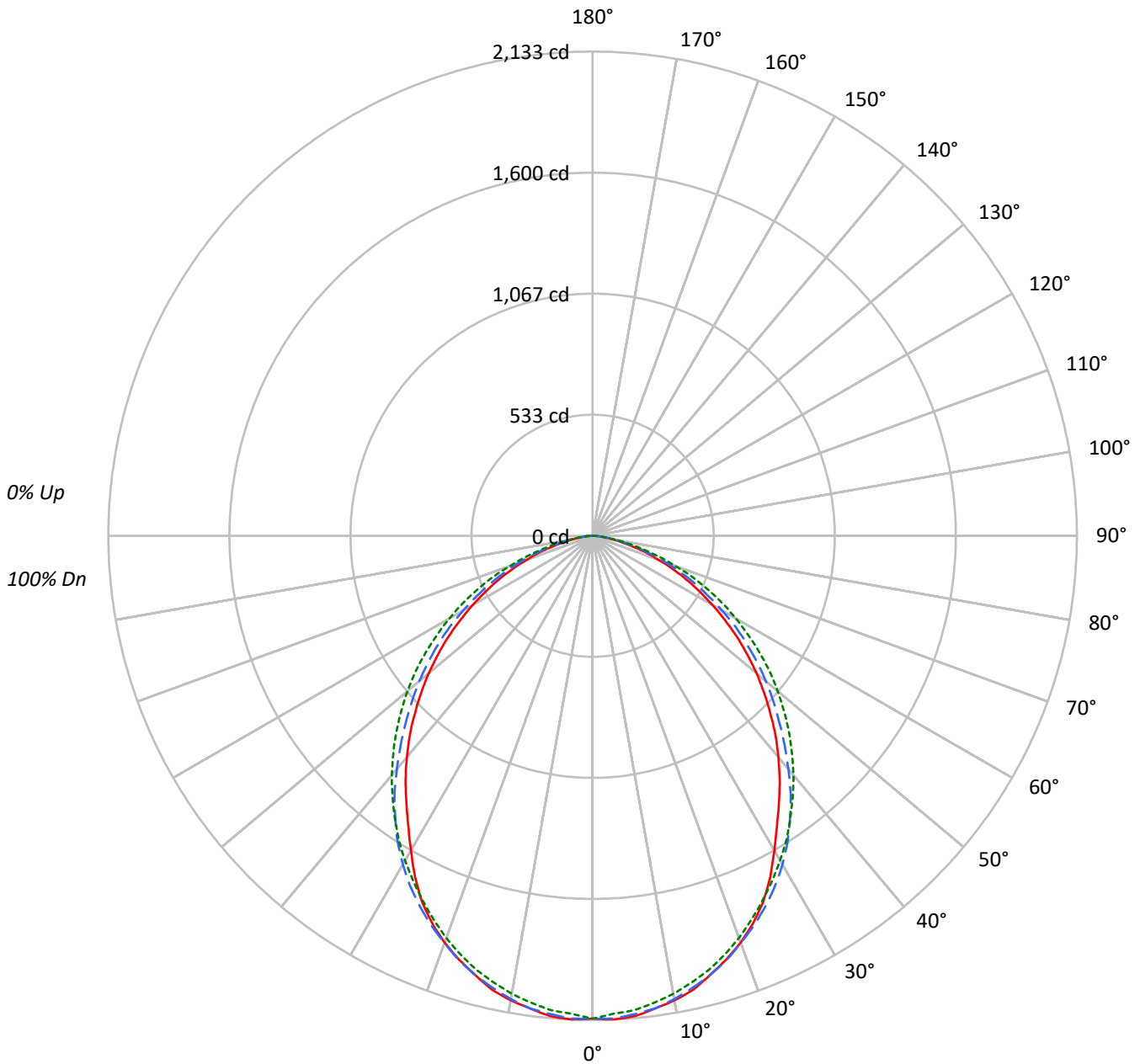
Lumens per Lamp: N/A
Luminaire Lumens: 4919.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	5725	5725	5725
5°	5740	5716	5667
10°	5679	5663	5599
15°	5578	5578	5514
20°	5460	5467	5397
25°	5280	5346	5261
30°	4972	5196	5132
35°	4698	4980	4988
40°	4470	4711	4835
45°	4214	4426	4653
50°	3945	4171	4455
55°	3639	3880	4214
60°	3277	3541	3919
65°	2893	3148	3564
70°	2412	2681	3028
75°	1895	2142	2371
80°	1354	1508	1672
85°	883	883	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.3	4.1
10°-20°	562.7	11.4
20°-30°	822.3	16.7
30°-40°	933.4	19.0
40°-50°	901.0	18.3
50°-60°	743.3	15.1
60°-70°	495.0	10.1
70°-80°	221.5	4.5
80°-90°	39.6	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°	1585.3	32.2
0°-40°	2518.6	51.2
0°-60°	4162.9	84.6
0°-90°	4919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2127	2127	2127	2127	2127	
5°	2125	2124	2116	2104	2098	201
15°	2002	2007	2002	1993	1979	564
25°	1778	1792	1800	1787	1772	814
35°	1430	1450	1516	1524	1518	896
45°	1107	1126	1163	1216	1223	854
55°	776	789	827	873	898	692
65°	454	467	494	530	560	451
75°	182	192	206	216	228	199
85°	29	29	29	27	27	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2127.3	2127.3	2127.3	2127.3	2127.3
2.5°	2133.1	2133.9	2129.0	2115.9	2107.7
5°	2124.9	2124.1	2115.9	2104.5	2097.9
7.5°	2101.2	2102.8	2100.4	2084.0	2075.0
10°	2078.3	2079.1	2072.6	2059.5	2048.9
12.5°	2048.9	2048.1	2039.1	2032.5	2015.4
15°	2002.3	2007.2	2002.3	1993.3	1979.4
17.5°	1957.3	1957.3	1960.6	1945.1	1934.5
20°	1906.7	1909.1	1909.1	1896.9	1884.6
22.5°	1847.8	1855.2	1857.6	1844.6	1829.9
25°	1778.4	1792.3	1800.4	1787.4	1771.8
27.5°	1694.2	1715.4	1740.0	1730.1	1713.0
30°	1600.2	1631.3	1672.1	1664.0	1651.7
32.5°	1511.1	1542.2	1598.6	1595.3	1588.8
35°	1430.2	1449.8	1516.0	1524.2	1518.5
37.5°	1353.4	1371.4	1433.5	1452.3	1447.4
40°	1272.5	1292.1	1341.1	1374.6	1376.3
42.5°	1192.4	1211.2	1251.2	1299.5	1299.5
45°	1107.4	1126.2	1163.0	1216.1	1222.6
47.5°	1024.0	1043.6	1079.6	1132.7	1143.4
50°	942.3	960.3	996.2	1047.7	1064.1
52.5°	857.3	876.9	912.1	959.5	983.2
55°	775.6	788.7	827.1	872.8	898.2
57.5°	690.6	702.8	746.2	785.4	811.5
60°	608.9	624.4	657.9	697.9	728.2
62.5°	530.4	546.8	575.4	610.5	644.8
65°	454.4	466.7	494.4	529.6	559.8
67.5°	380.8	391.5	419.3	443.8	475.6
70°	306.5	320.4	340.8	364.5	384.9
72.5°	246.8	252.5	269.7	286.9	308.1
75°	182.3	192.1	206.0	215.8	228.0
77.5°	130.8	136.5	144.7	152.8	164.3
80°	87.4	89.9	97.3	98.9	107.9
82.5°	53.1	54.8	56.4	57.2	60.5
85°	28.6	28.6	28.6	27.0	27.0
87.5°	16.3	16.3	13.9	11.4	8.2
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)