

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: P557351

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-87-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: P557351
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-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDES
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

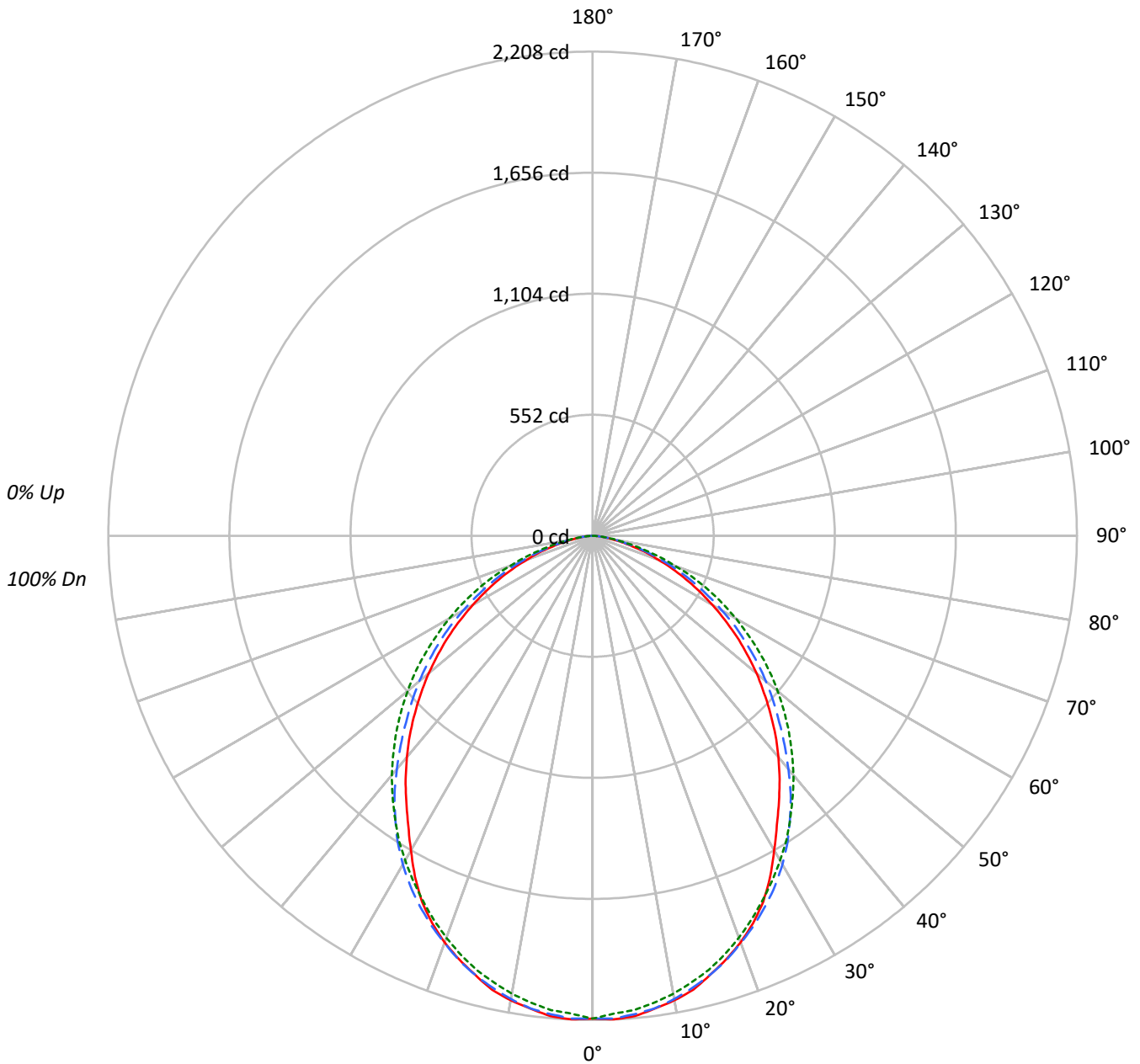
Lumens per Lamp: N/A
Luminaire Lumens: 5091.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	5925	5925	5925
5°	5941	5915	5865
10°	5878	5861	5794
15°	5773	5773	5707
20°	5651	5658	5586
25°	5465	5533	5445
30°	5146	5377	5312
35°	4863	5154	5163
40°	4626	4876	5004
45°	4362	4580	4816
50°	4083	4317	4611
55°	3766	4016	4361
60°	3392	3665	4056
65°	2995	3258	3689
70°	2496	2775	3135
75°	1961	2217	2454
80°	1402	1561	1731
85°	914	914	861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.3	4.1
10°-20°	582.4	11.4
20°-30°	851.0	16.7
30°-40°	966.0	19.0
40°-50°	932.5	18.3
50°-60°	769.3	15.1
60°-70°	512.3	10.1
70°-80°	229.2	4.5
80°-90°	41.0	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°	1640.7	32.2
0°-40°	2606.7	51.2
0°-60°	4308.5	84.6
0°-90°	5091.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5091.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2202	2202	2202	2202	2202	
5°	2199	2198	2190	2178	2171	208
15°	2072	2077	2072	2063	2049	584
25°	1841	1855	1863	1850	1834	843
35°	1480	1500	1569	1578	1572	927
45°	1146	1166	1204	1259	1265	884
55°	803	816	856	903	930	716
65°	470	483	512	548	579	466
75°	189	199	213	223	236	206
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°	2201.7	2201.7	2201.7	2201.7	2201.7
2.5°	2207.6	2208.5	2203.4	2189.9	2181.4
5°	2199.2	2198.3	2189.9	2178.0	2171.3
7.5°	2174.7	2176.4	2173.8	2156.9	2147.6
10°	2151.0	2151.8	2145.1	2131.5	2120.5
12.5°	2120.5	2119.7	2110.4	2103.6	2085.8
15°	2072.3	2077.4	2072.3	2063.0	2048.6
17.5°	2025.8	2025.8	2029.2	2013.1	2002.1
20°	1973.3	1975.9	1975.9	1963.2	1950.5
22.5°	1912.4	1920.1	1922.6	1909.1	1893.8
25°	1840.6	1854.9	1863.4	1849.9	1833.8
27.5°	1753.4	1775.4	1800.8	1790.6	1772.9
30°	1656.2	1688.3	1730.6	1722.1	1709.4
32.5°	1564.0	1596.1	1654.5	1651.1	1644.3
35°	1480.2	1500.5	1569.0	1577.5	1571.6
37.5°	1400.7	1419.3	1483.6	1503.1	1498.0
40°	1317.0	1337.3	1388.0	1422.7	1424.4
42.5°	1234.1	1253.5	1295.0	1344.9	1344.9
45°	1146.1	1165.6	1203.6	1258.6	1265.4
47.5°	1059.8	1080.1	1117.4	1172.3	1183.3
50°	975.3	993.9	1031.1	1084.4	1101.3
52.5°	887.3	907.6	944.0	993.0	1017.5
55°	802.7	816.2	856.0	903.4	929.6
57.5°	714.7	727.4	772.3	812.9	839.9
60°	630.2	646.2	680.9	722.3	753.6
62.5°	549.0	565.9	595.5	631.8	667.4
65°	470.3	483.0	511.7	548.1	579.4
67.5°	394.2	405.2	433.9	459.3	492.3
70°	317.2	331.6	352.7	377.2	398.4
72.5°	255.4	261.4	279.1	296.9	318.9
75°	188.6	198.8	213.2	223.3	236.0
77.5°	135.3	141.3	149.7	158.2	170.0
80°	90.5	93.0	100.7	102.3	111.7
82.5°	55.0	56.7	58.4	59.2	62.6
85°	29.6	29.6	29.6	27.9	27.9
87.5°	16.9	16.9	14.4	11.8	8.5
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)