

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: P557325

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-96-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: P557325
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-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

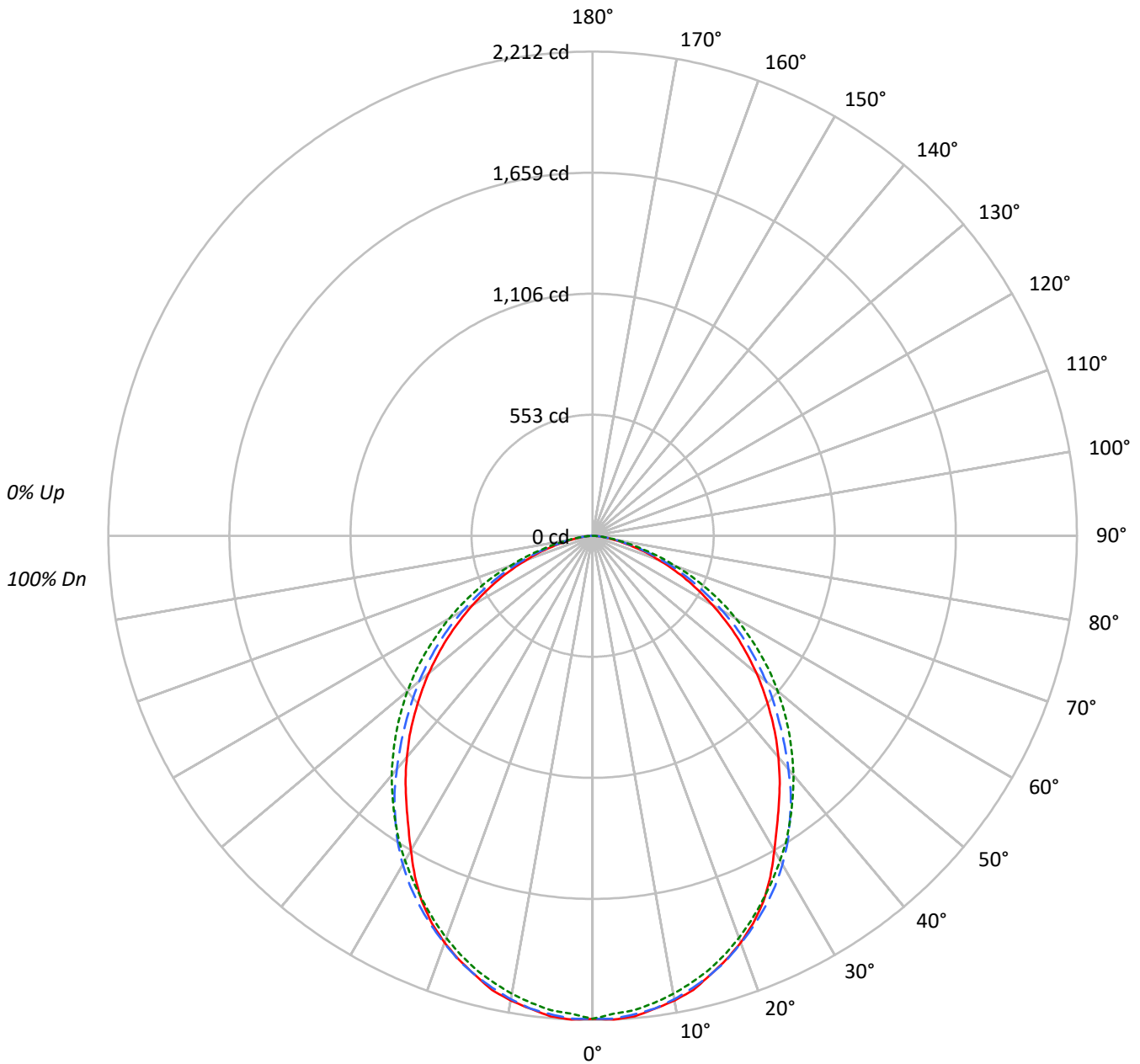
Lumens per Lamp: N/A
Luminaire Lumens: 5102.0 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	5938	5938	5938
5°	5953	5928	5878
10°	5890	5874	5807
15°	5786	5786	5720
20°	5663	5671	5598
25°	5477	5545	5456
30°	5157	5389	5323
35°	4873	5165	5174
40°	4636	4886	5015
45°	4371	4590	4826
50°	4092	4326	4621
55°	3774	4024	4371
60°	3399	3673	4065
65°	3001	3265	3698
70°	2501	2781	3142
75°	1965	2221	2459
80°	1406	1564	1734
85°	917	917	865



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.7	4.1
10°-20°	583.6	11.4
20°-30°	852.9	16.7
30°-40°	968.1	19.0
40°-50°	934.5	18.3
50°-60°	770.9	15.1
60°-70°	513.4	10.1
70°-80°	229.7	4.5
80°-90°	41.1	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°	1644.2	32.2
0°-40°	2612.3	51.2
0°-60°	4317.8	84.6
0°-90°	5102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2204	2203	2195	2183	2176	209
15°	2077	2082	2077	2068	2053	585
25°	1844	1859	1867	1854	1838	845
35°	1483	1504	1572	1581	1575	929
45°	1149	1168	1206	1261	1268	886
55°	804	818	858	905	932	718
65°	471	484	513	549	581	467
75°	189	199	214	224	236	207
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°	2206.5	2206.5	2206.5	2206.5	2206.5
2.5°	2212.4	2213.3	2208.2	2194.6	2186.1
5°	2203.9	2203.1	2194.6	2182.7	2176.0
7.5°	2179.4	2181.1	2178.5	2161.6	2152.2
10°	2155.6	2156.5	2149.7	2136.1	2125.1
12.5°	2125.1	2124.3	2114.9	2108.2	2090.4
15°	2076.8	2081.9	2076.8	2067.5	2053.1
17.5°	2030.2	2030.2	2033.6	2017.5	2006.4
20°	1977.6	1980.2	1980.2	1967.4	1954.7
22.5°	1916.6	1924.2	1926.8	1913.2	1897.9
25°	1844.5	1858.9	1867.4	1853.9	1837.7
27.5°	1757.2	1779.3	1804.7	1794.5	1776.7
30°	1659.7	1691.9	1734.3	1725.9	1713.1
32.5°	1567.3	1599.6	1658.0	1654.7	1647.9
35°	1483.4	1503.8	1572.4	1580.9	1575.0
37.5°	1403.7	1422.4	1486.8	1506.3	1501.2
40°	1319.8	1340.2	1391.0	1425.8	1427.5
42.5°	1236.7	1256.2	1297.8	1347.8	1347.8
45°	1148.6	1168.1	1206.2	1261.3	1268.1
47.5°	1062.1	1082.5	1119.8	1174.9	1185.9
50°	977.4	996.0	1033.3	1086.7	1103.7
52.5°	889.2	909.5	946.0	995.2	1019.7
55°	804.4	818.0	857.8	905.3	931.6
57.5°	716.3	729.0	773.9	814.6	841.7
60°	631.5	647.6	682.4	723.9	755.3
62.5°	550.1	567.1	596.8	633.2	668.8
65°	471.3	484.0	512.8	549.3	580.7
67.5°	395.0	406.0	434.9	460.3	493.3
70°	317.9	332.3	353.5	378.1	399.3
72.5°	256.0	261.9	279.7	297.5	319.6
75°	189.0	199.2	213.6	223.8	236.5
77.5°	135.6	141.6	150.0	158.5	170.4
80°	90.7	93.2	100.9	102.6	111.9
82.5°	55.1	56.8	58.5	59.3	62.7
85°	29.7	29.7	29.7	28.0	28.0
87.5°	17.0	17.0	14.4	11.9	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)