

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: P556768

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-93-84-EDD-90**

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: P556768
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-LD4-1STD-35-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

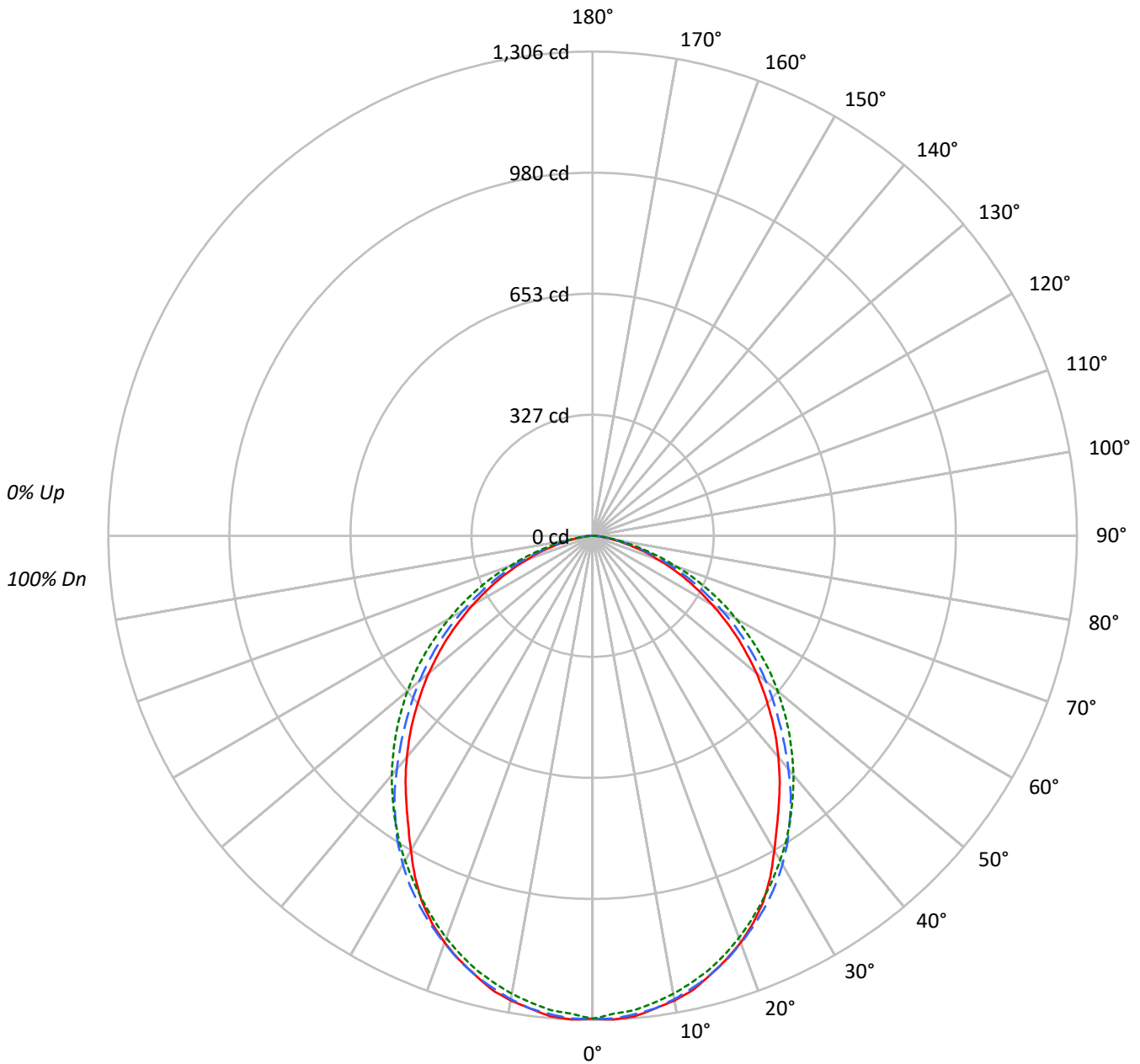
Lumens per Lamp: N/A
Luminaire Lumens: 3012.0 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	3505	3505	3505
5°	3515	3500	3470
10°	3477	3468	3428
15°	3416	3416	3377
20°	3343	3348	3305
25°	3233	3273	3221
30°	3045	3182	3143
35°	2877	3050	3054
40°	2737	2885	2960
45°	2581	2710	2849
50°	2416	2554	2728
55°	2228	2376	2580
60°	2006	2168	2400
65°	1771	1928	2183
70°	1477	1642	1854
75°	1160	1311	1451
80°	829	924	1024
85°	540	540	509



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.6	4.1
10°-20°	344.5	11.4
20°-30°	503.5	16.7
30°-40°	571.5	19.0
40°-50°	551.7	18.3
50°-60°	455.1	15.1
60°-70°	303.1	10.1
70°-80°	135.6	4.5
80°-90°	24.3	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°	970.7	32.2
0°-40°	1542.2	51.2
0°-60°	2549.0	84.6
0°-90°	3012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1303	1303	1303	1303	1303	
5°	1301	1301	1296	1289	1285	123
15°	1226	1229	1226	1220	1212	346
25°	1089	1097	1102	1094	1085	499
35°	876	888	928	933	930	549
45°	678	690	712	745	749	523
55°	475	483	506	534	550	424
65°	278	286	303	324	343	276
75°	112	118	126	132	140	122
85°	18	18	18	16	16	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1302.6	1302.6	1302.6	1302.6	1302.6
2.5°	1306.1	1306.6	1303.6	1295.6	1290.6
5°	1301.1	1300.6	1295.6	1288.6	1284.6
7.5°	1286.6	1287.6	1286.1	1276.1	1270.6
10°	1272.6	1273.1	1269.1	1261.1	1254.6
12.5°	1254.6	1254.1	1248.6	1244.6	1234.1
15°	1226.0	1229.0	1226.0	1220.5	1212.0
17.5°	1198.5	1198.5	1200.5	1191.0	1184.5
20°	1167.5	1169.0	1169.0	1161.5	1154.0
22.5°	1131.5	1136.0	1137.5	1129.5	1120.5
25°	1088.9	1097.4	1102.4	1094.4	1084.9
27.5°	1037.4	1050.4	1065.4	1059.4	1048.9
30°	979.8	998.9	1023.9	1018.9	1011.4
32.5°	925.3	944.3	978.8	976.8	972.8
35°	875.7	887.8	928.3	933.3	929.8
37.5°	828.7	839.7	877.7	889.3	886.3
40°	779.2	791.2	821.2	841.7	842.7
42.5°	730.1	741.6	766.2	795.7	795.7
45°	678.1	689.6	712.1	744.6	748.6
47.5°	627.0	639.0	661.1	693.6	700.1
50°	577.0	588.0	610.0	641.5	651.6
52.5°	524.9	537.0	558.5	587.5	602.0
55°	474.9	482.9	506.4	534.5	550.0
57.5°	422.9	430.4	456.9	480.9	496.9
60°	372.8	382.3	402.8	427.4	445.9
62.5°	324.8	334.8	352.3	373.8	394.8
65°	278.2	285.7	302.8	324.3	342.8
67.5°	233.2	239.7	256.7	271.7	291.2
70°	187.7	196.2	208.7	223.2	235.7
72.5°	151.1	154.6	165.1	175.6	188.7
75°	111.6	117.6	126.1	132.1	139.6
77.5°	80.1	83.6	88.6	93.6	100.6
80°	53.5	55.0	59.6	60.6	66.1
82.5°	32.5	33.5	34.5	35.0	37.0
85°	17.5	17.5	17.5	16.5	16.5
87.5°	10.0	10.0	8.5	7.0	5.0
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)