

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: P556836

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-86-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: P556836
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-40-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

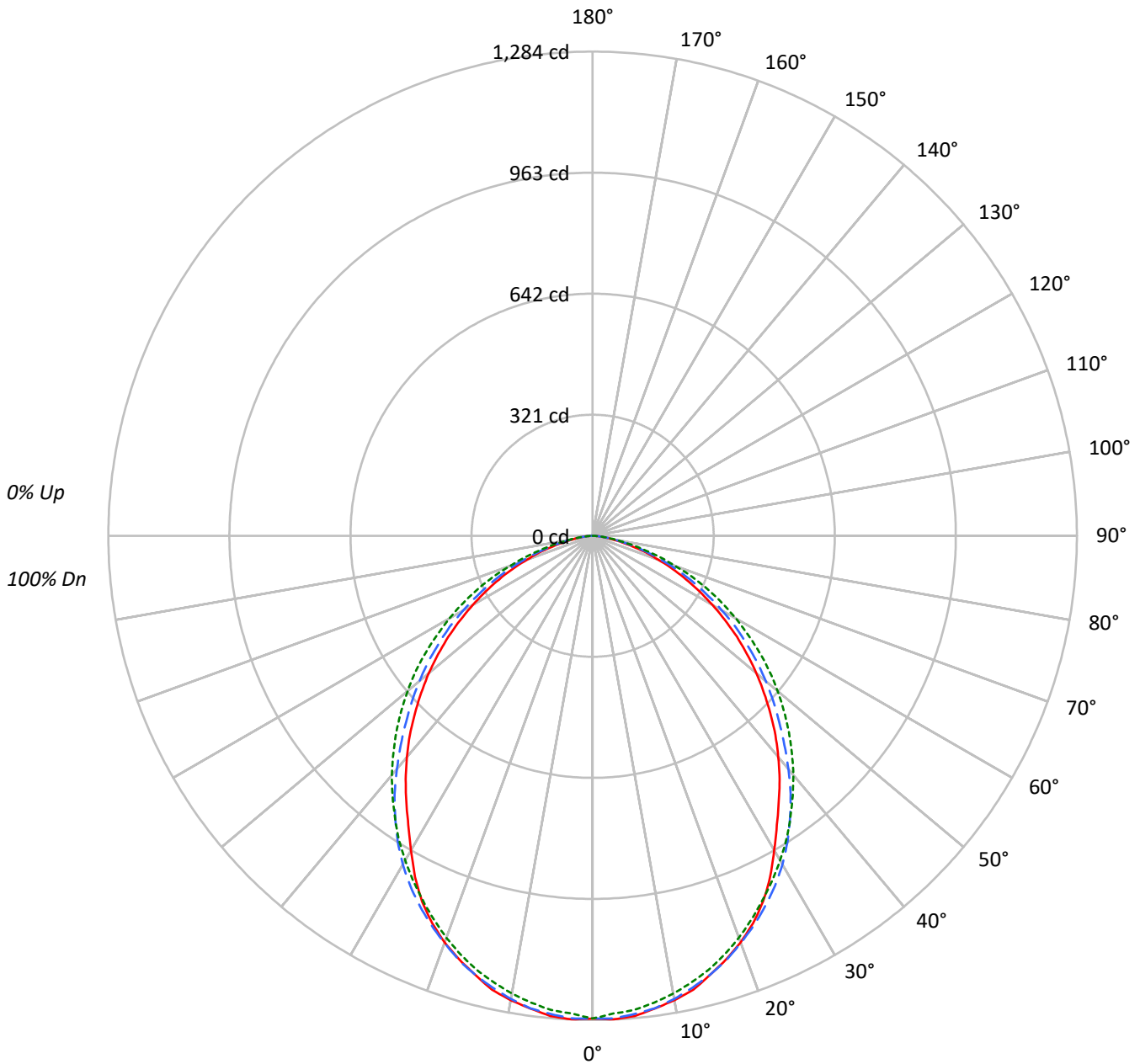
Lumens per Lamp: N/A
Luminaire Lumens: 2960.0 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3445	3445	3445
5°	3454	3439	3410
10°	3417	3408	3369
15°	3357	3357	3318
20°	3285	3290	3248
25°	3177	3217	3166
30°	2992	3127	3088
35°	2827	2997	3002
40°	2690	2835	2909
45°	2536	2663	2800
50°	2374	2510	2681
55°	2190	2335	2536
60°	1972	2131	2358
65°	1741	1894	2145
70°	1451	1614	1822
75°	1141	1288	1426
80°	815	907	1006
85°	531	531	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	4.1
10°-20°	338.6	11.4
20°-30°	494.8	16.7
30°-40°	561.6	19.0
40°-50°	542.2	18.3
50°-60°	447.3	15.1
60°-70°	297.8	10.1
70°-80°	133.3	4.5
80°-90°	23.8	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°	953.9	32.2
0°-40°	1515.6	51.2
0°-60°	2505.0	84.6
0°-90°	2960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2960.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1280	1280	1280	1280	1280	
5°	1279	1278	1273	1266	1262	121
15°	1205	1208	1205	1200	1191	340
25°	1070	1078	1083	1076	1066	490
35°	861	872	912	917	914	539
45°	666	678	700	732	736	514
55°	467	475	498	525	540	417
65°	273	281	298	319	337	271
75°	110	116	124	130	137	120
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1280.1	1280.1	1280.1	1280.1	1280.1
2.5°	1283.6	1284.1	1281.1	1273.2	1268.3
5°	1278.6	1278.2	1273.2	1266.4	1262.4
7.5°	1264.4	1265.4	1263.9	1254.1	1248.6
10°	1250.6	1251.1	1247.2	1239.3	1232.9
12.5°	1232.9	1232.4	1227.0	1223.1	1212.7
15°	1204.9	1207.8	1204.9	1199.5	1191.1
17.5°	1177.8	1177.8	1179.8	1170.5	1164.1
20°	1147.3	1148.8	1148.8	1141.4	1134.1
22.5°	1111.9	1116.4	1117.8	1110.0	1101.1
25°	1070.1	1078.5	1083.4	1075.5	1066.2
27.5°	1019.5	1032.3	1047.0	1041.1	1030.8
30°	962.9	981.6	1006.2	1001.3	993.9
32.5°	909.3	928.0	961.9	960.0	956.0
35°	860.6	872.4	912.3	917.2	913.7
37.5°	814.4	825.2	862.6	873.9	871.0
40°	765.7	777.5	807.0	827.2	828.2
42.5°	717.5	728.8	752.9	781.9	781.9
45°	666.4	677.7	699.8	731.8	735.7
47.5°	616.2	628.0	649.7	681.6	688.0
50°	567.0	577.9	599.5	630.5	640.3
52.5°	515.9	527.7	548.8	577.4	591.6
55°	466.7	474.6	497.7	525.2	540.5
57.5°	415.6	422.9	449.0	472.6	488.3
60°	366.4	375.7	395.9	420.0	438.2
62.5°	319.2	329.0	346.2	367.4	388.0
65°	273.4	280.8	297.5	318.7	336.9
67.5°	229.2	235.6	252.3	267.0	286.2
70°	184.4	192.8	205.1	219.3	231.6
72.5°	148.5	152.0	162.3	172.6	185.4
75°	109.7	115.6	123.9	129.8	137.2
77.5°	78.7	82.1	87.0	92.0	98.8
80°	52.6	54.1	58.5	59.5	64.9
82.5°	32.0	32.9	33.9	34.4	36.4
85°	17.2	17.2	17.2	16.2	16.2
87.5°	9.8	9.8	8.4	6.9	4.9
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)