

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: P556832

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-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: P556832
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-93-84-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

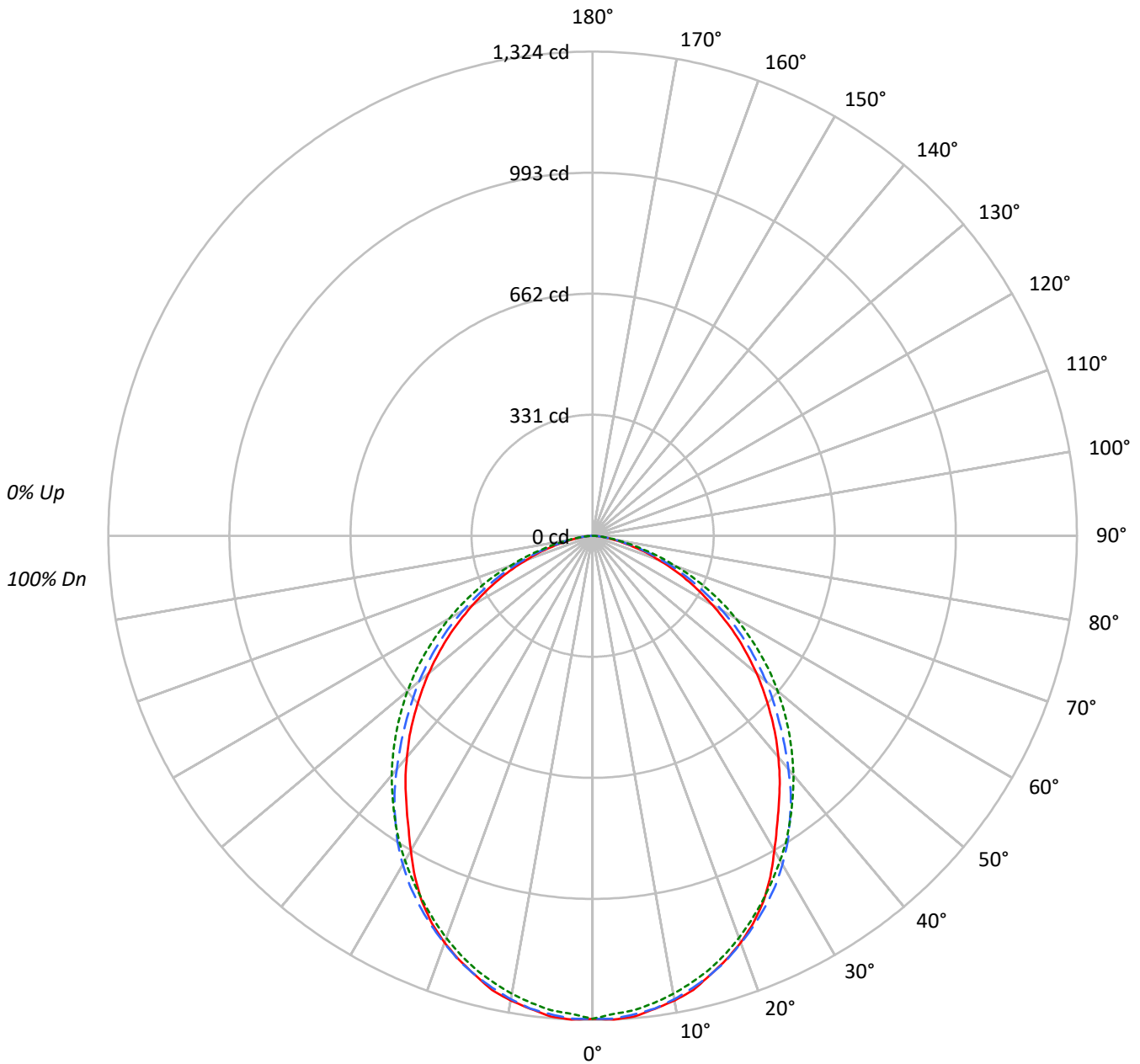
Lumens per Lamp: N/A
Luminaire Lumens: 3054.0 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3554	3554	3554
5°	3564	3549	3518
10°	3526	3516	3476
15°	3463	3463	3424
20°	3390	3394	3351
25°	3278	3319	3266
30°	3087	3226	3187
35°	2917	3092	3097
40°	2775	2925	3002
45°	2616	2748	2889
50°	2449	2589	2766
55°	2259	2409	2616
60°	2034	2199	2433
65°	1796	1955	2213
70°	1497	1665	1880
75°	1177	1330	1472
80°	841	936	1038
85°	550	550	516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.4	4.1
10°-20°	349.3	11.4
20°-30°	510.5	16.7
30°-40°	579.5	19.0
40°-50°	559.4	18.3
50°-60°	461.5	15.1
60°-70°	307.3	10.1
70°-80°	137.5	4.5
80°-90°	24.6	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°	984.2	32.2
0°-40°	1563.7	51.2
0°-60°	2584.6	84.6
0°-90°	3054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1321	1321	1321	1321	1321	
5°	1319	1319	1314	1307	1302	125
15°	1243	1246	1243	1238	1229	350
25°	1104	1113	1118	1110	1100	506
35°	888	900	941	946	943	556
45°	688	699	722	755	759	530
55°	482	490	514	542	558	430
65°	282	290	307	329	348	280
75°	113	119	128	134	142	124
85°	18	18	18	17	17	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1320.8	1320.8	1320.8	1320.8	1320.8
2.5°	1324.3	1324.8	1321.8	1313.7	1308.6
5°	1319.3	1318.7	1313.7	1306.6	1302.5
7.5°	1304.5	1305.6	1304.0	1293.9	1288.3
10°	1290.3	1290.8	1286.8	1278.7	1272.1
12.5°	1272.1	1271.6	1266.0	1261.9	1251.3
15°	1243.1	1246.2	1243.1	1237.6	1228.9
17.5°	1215.2	1215.2	1217.3	1207.6	1201.0
20°	1183.8	1185.3	1185.3	1177.7	1170.1
22.5°	1147.2	1151.8	1153.3	1145.2	1136.1
25°	1104.1	1112.7	1117.8	1109.7	1100.1
27.5°	1051.9	1065.0	1080.3	1074.2	1063.5
30°	993.5	1012.8	1038.2	1033.1	1025.5
32.5°	938.2	957.5	992.5	990.5	986.4
35°	888.0	900.1	941.2	946.3	942.8
37.5°	840.3	851.4	890.0	901.7	898.6
40°	790.0	802.2	832.7	853.5	854.5
42.5°	740.3	752.0	776.8	806.8	806.8
45°	687.5	699.2	722.0	755.0	759.1
47.5°	635.8	648.0	670.3	703.3	709.9
50°	585.0	596.2	618.5	650.5	660.6
52.5°	532.3	544.4	566.3	595.7	610.4
55°	481.5	489.6	513.5	541.9	557.6
57.5°	428.8	436.4	463.3	487.6	503.9
60°	378.0	387.7	408.5	433.3	452.1
62.5°	329.3	339.5	357.2	379.0	400.3
65°	282.1	289.7	307.0	328.8	347.6
67.5°	236.5	243.0	260.3	275.5	295.3
70°	190.3	198.9	211.6	226.3	239.0
72.5°	153.2	156.8	167.4	178.1	191.3
75°	113.2	119.2	127.9	134.0	141.6
77.5°	81.2	84.7	89.8	94.9	102.0
80°	54.3	55.8	60.4	61.4	67.0
82.5°	33.0	34.0	35.0	35.5	37.5
85°	17.8	17.8	17.8	16.7	16.7
87.5°	10.1	10.1	8.6	7.1	5.1
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)