

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: P556838

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-87-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: P556838
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-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

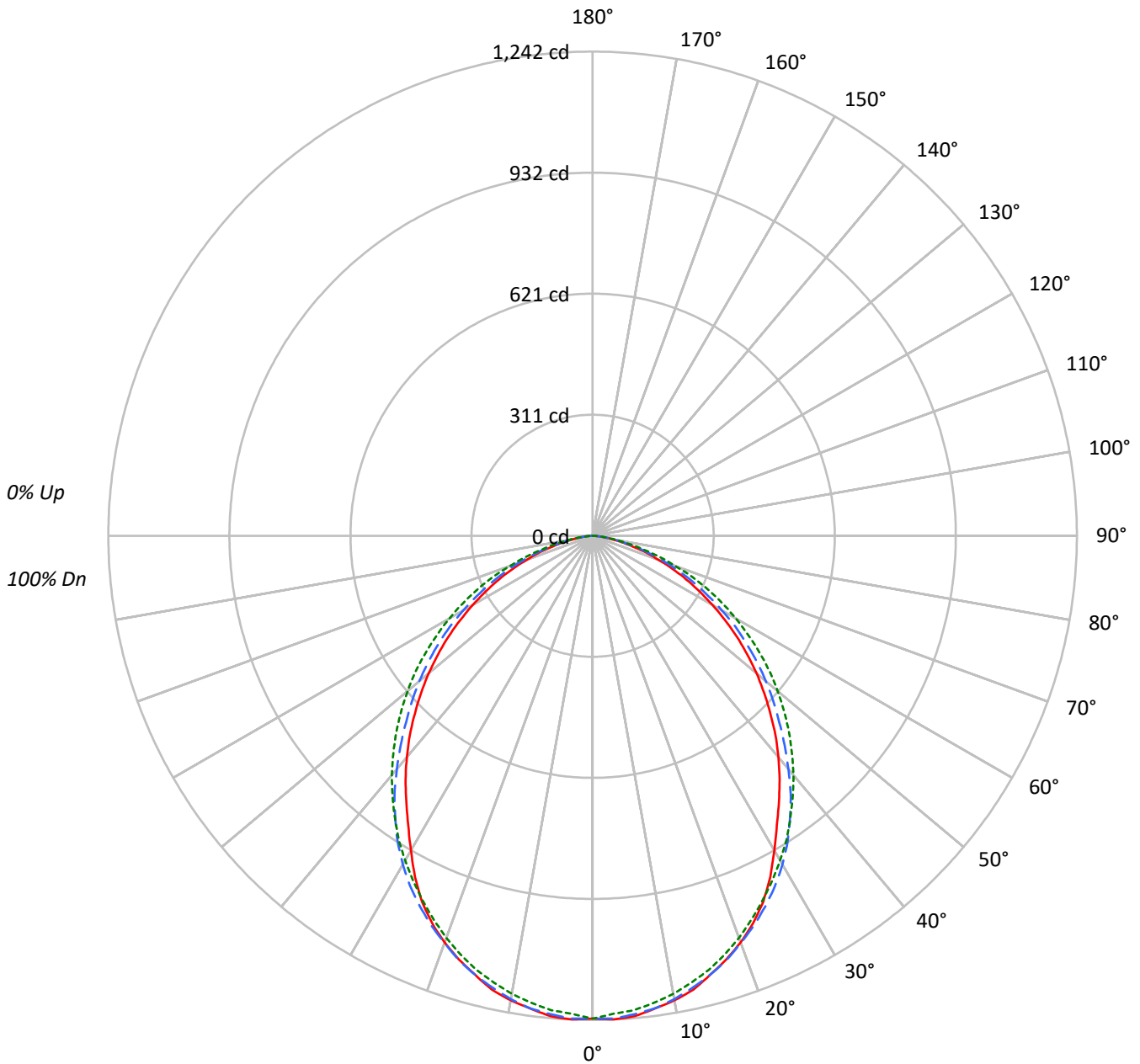
Lumens per Lamp: N/A
Luminaire Lumens: 2864.0 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3333	3333	3333
5°	3342	3328	3300
10°	3307	3297	3260
15°	3248	3248	3211
20°	3179	3183	3142
25°	3074	3113	3063
30°	2895	3025	2988
35°	2735	2900	2904
40°	2603	2743	2815
45°	2454	2577	2709
50°	2297	2428	2593
55°	2119	2259	2453
60°	1908	2061	2282
65°	1685	1833	2075
70°	1404	1561	1763
75°	1103	1247	1381
80°	789	877	973
85°	516	516	485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	4.1
10°-20°	327.6	11.4
20°-30°	478.8	16.7
30°-40°	543.4	19.0
40°-50°	524.6	18.3
50°-60°	432.8	15.1
60°-70°	288.2	10.1
70°-80°	128.9	4.5
80°-90°	23.1	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°	923.0	32.2
0°-40°	1466.4	51.2
0°-60°	2423.8	84.6
0°-90°	2864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1237	1232	1225	1222	117
15°	1166	1169	1166	1161	1152	329
25°	1035	1044	1048	1041	1032	474
35°	833	844	883	887	884	522
45°	645	656	677	708	712	497
55°	452	459	482	508	523	403
65°	265	272	288	308	326	262
75°	106	112	120	126	133	116
85°	17	17	17	16	16	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1238.6	1238.6	1238.6	1238.6	1238.6
2.5°	1241.9	1242.4	1239.6	1231.9	1227.2
5°	1237.2	1236.7	1231.9	1225.3	1221.5
7.5°	1223.4	1224.3	1222.9	1213.4	1208.2
10°	1210.1	1210.5	1206.7	1199.1	1192.9
12.5°	1192.9	1192.4	1187.2	1183.4	1173.4
15°	1165.8	1168.7	1165.8	1160.6	1152.5
17.5°	1139.6	1139.6	1141.5	1132.5	1126.3
20°	1110.1	1111.6	1111.6	1104.4	1097.3
22.5°	1075.9	1080.2	1081.6	1074.0	1065.4
25°	1035.4	1043.5	1048.3	1040.7	1031.6
27.5°	986.4	998.8	1013.1	1007.3	997.4
30°	931.7	949.8	973.6	968.8	961.7
32.5°	879.8	897.9	930.7	928.8	925.0
35°	832.7	844.1	882.7	887.4	884.1
37.5°	788.0	798.5	834.6	845.6	842.7
40°	740.9	752.3	780.8	800.4	801.3
42.5°	694.2	705.2	728.5	756.6	756.6
45°	644.8	655.7	677.1	708.0	711.9
47.5°	596.2	607.6	628.6	659.5	665.7
50°	548.6	559.1	580.0	610.0	619.5
52.5°	499.2	510.6	531.0	558.6	572.4
55°	451.6	459.2	481.5	508.2	522.9
57.5°	402.1	409.2	434.4	457.3	472.5
60°	354.5	363.5	383.0	406.4	424.0
62.5°	308.8	318.3	335.0	355.5	375.4
65°	264.6	271.7	287.9	308.3	325.9
67.5°	221.7	227.9	244.1	258.4	276.9
70°	178.4	186.5	198.4	212.2	224.1
72.5°	143.7	147.0	157.0	167.0	179.4
75°	106.1	111.8	119.9	125.6	132.8
77.5°	76.1	79.5	84.2	89.0	95.6
80°	50.9	52.3	56.6	57.6	62.8
82.5°	30.9	31.9	32.8	33.3	35.2
85°	16.7	16.7	16.7	15.7	15.7
87.5°	9.5	9.5	8.1	6.7	4.8
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)