

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: P556746

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-81-94-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: P556746
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-81-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

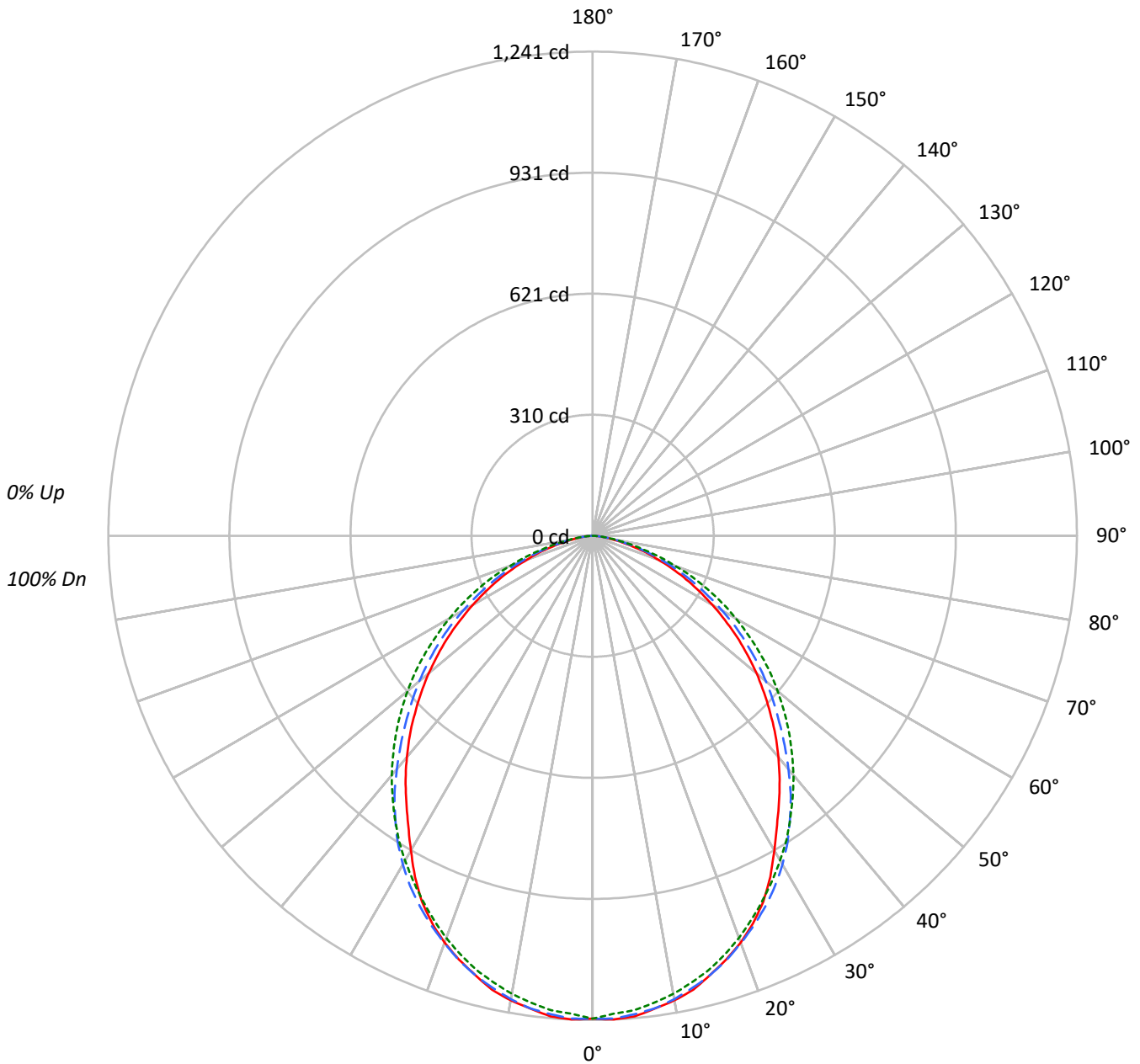
Lumens per Lamp: N/A
Luminaire Lumens: 2862.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3331	3331	3331
5°	3340	3326	3297
10°	3304	3295	3257
15°	3246	3246	3209
20°	3177	3181	3140
25°	3072	3110	3061
30°	2893	3023	2986
35°	2734	2898	2902
40°	2601	2741	2813
45°	2452	2575	2707
50°	2295	2426	2592
55°	2117	2258	2452
60°	1907	2060	2280
65°	1684	1832	2074
70°	1403	1560	1762
75°	1102	1246	1380
80°	789	877	973
85°	513	513	485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.5	4.1
10°-20°	327.4	11.4
20°-30°	478.4	16.7
30°-40°	543.1	19.0
40°-50°	524.2	18.3
50°-60°	432.5	15.1
60°-70°	288.0	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°	922.3	32.2
0°-40°	1465.4	51.2
0°-60°	2422.1	84.6
0°-90°	2862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1238	1238	1238	1238	1238	
5°	1236	1236	1231	1224	1221	117
15°	1165	1168	1165	1160	1152	328
25°	1035	1043	1048	1040	1031	474
35°	832	844	882	887	884	521
45°	644	655	677	708	711	497
55°	451	459	481	508	523	403
65°	264	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°	1237.7	1237.7	1237.7	1237.7	1237.7
2.5°	1241.1	1241.5	1238.7	1231.1	1226.3
5°	1236.3	1235.8	1231.1	1224.4	1220.6
7.5°	1222.5	1223.5	1222.0	1212.5	1207.3
10°	1209.2	1209.7	1205.9	1198.3	1192.1
12.5°	1192.1	1191.6	1186.4	1182.6	1172.6
15°	1165.0	1167.8	1165.0	1159.8	1151.7
17.5°	1138.8	1138.8	1140.7	1131.7	1125.5
20°	1109.4	1110.8	1110.8	1103.6	1096.5
22.5°	1075.1	1079.4	1080.8	1073.2	1064.7
25°	1034.7	1042.8	1047.5	1039.9	1030.9
27.5°	985.7	998.1	1012.4	1006.6	996.7
30°	931.0	949.1	972.9	968.1	961.0
32.5°	879.2	897.3	930.1	928.2	924.4
35°	832.1	843.5	882.1	886.8	883.5
37.5°	787.4	797.9	834.0	845.0	842.1
40°	740.4	751.8	780.3	799.8	800.8
42.5°	693.8	704.7	728.0	756.1	756.1
45°	644.3	655.2	676.6	707.6	711.4
47.5°	595.8	607.2	628.1	659.1	665.2
50°	548.3	558.7	579.6	609.6	619.1
52.5°	498.8	510.2	530.7	558.2	572.0
55°	451.3	458.9	481.2	507.8	522.6
57.5°	401.8	408.9	434.1	457.0	472.2
60°	354.3	363.3	382.8	406.1	423.7
62.5°	308.6	318.1	334.8	355.2	375.2
65°	264.4	271.5	287.7	308.1	325.7
67.5°	221.6	227.8	243.9	258.2	276.7
70°	178.3	186.4	198.3	212.1	224.0
72.5°	143.6	146.9	156.9	166.9	179.3
75°	106.0	111.7	119.8	125.5	132.7
77.5°	76.1	79.4	84.2	88.9	95.6
80°	50.9	52.3	56.6	57.5	62.8
82.5°	30.9	31.9	32.8	33.3	35.2
85°	16.6	16.6	16.6	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)