

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: P556848

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-80-84-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: P556848
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-50-UNV-80-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

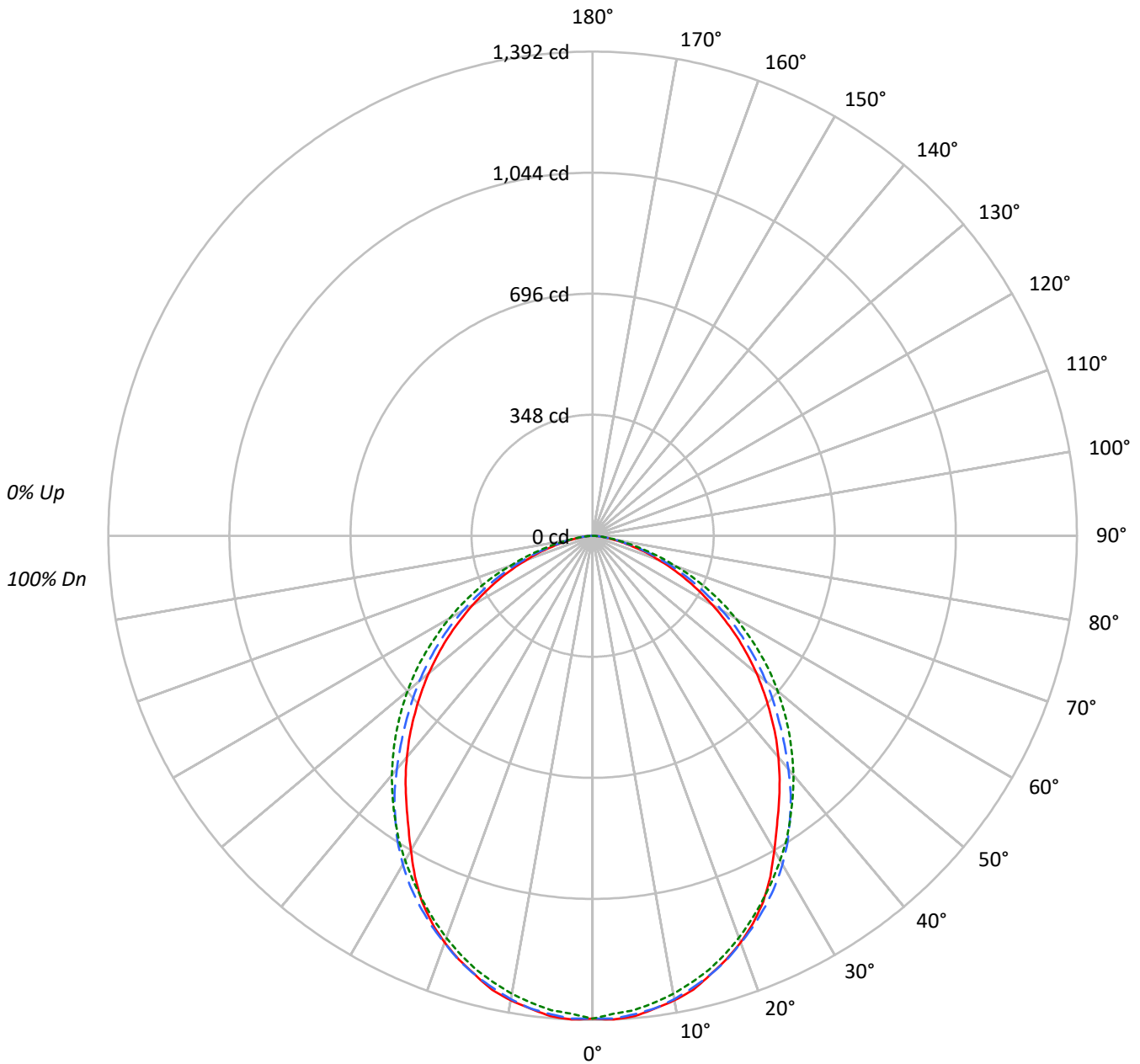
Lumens per Lamp: N/A
Luminaire Lumens: 3210.0 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): 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°	3736	3736	3736
5°	3746	3730	3698
10°	3706	3696	3653
15°	3640	3640	3599
20°	3563	3568	3522
25°	3446	3488	3433
30°	3245	3391	3349
35°	3066	3250	3255
40°	2917	3074	3155
45°	2750	2888	3037
50°	2574	2722	2907
55°	2374	2532	2750
60°	2138	2310	2558
65°	1888	2055	2326
70°	1574	1750	1976
75°	1236	1397	1547
80°	885	984	1091
85°	577	577	543



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	4.1
10°-20°	367.2	11.4
20°-30°	536.6	16.7
30°-40°	609.1	19.0
40°-50°	588.0	18.3
50°-60°	485.0	15.1
60°-70°	323.0	10.1
70°-80°	144.5	4.5
80°-90°	25.9	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°	1034.5	32.2
0°-40°	1643.6	51.2
0°-60°	2716.6	84.6
0°-90°	3210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1387	1386	1381	1373	1369	131
15°	1307	1310	1307	1301	1292	368
25°	1160	1170	1175	1166	1156	531
35°	933	946	989	995	991	585
45°	723	735	759	794	798	558
55°	506	515	540	570	586	452
65°	296	304	323	346	365	294
75°	119	125	134	141	149	130
85°	19	19	19	18	18	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.2	<i>1388.2</i>	1388.2	1388.2	1388.2
2.5°	<i>1392.0</i>	<i>1392.5</i>	<i>1389.3</i>	<i>1380.8</i>	<i>1375.4</i>
5°	1386.6	<i>1386.1</i>	1380.8	1373.3	1369.0
7.5°	1371.2	<i>1372.2</i>	1370.6	1360.0	1354.1
10°	1356.2	<i>1356.8</i>	1352.5	1344.0	1337.0
12.5°	1337.0	<i>1336.5</i>	1330.6	1326.4	1315.2
15°	1306.6	<i>1309.8</i>	1306.6	1300.8	1291.7
17.5°	1277.3	<i>1277.3</i>	1279.4	1269.3	1262.4
20°	1244.2	<i>1245.8</i>	1245.8	1237.8	1229.8
22.5°	1205.8	<i>1210.6</i>	1212.2	1203.7	1194.1
25°	1160.5	<i>1169.6</i>	1174.9	1166.4	1156.2
27.5°	1105.6	<i>1119.4</i>	1135.4	1129.0	1117.8
30°	1044.2	<i>1064.5</i>	1091.2	1085.8	1077.8
32.5°	986.1	<i>1006.4</i>	1043.2	1041.0	1036.8
35°	933.3	<i>946.1</i>	989.3	994.6	990.9
37.5°	883.2	<i>894.9</i>	935.5	947.7	944.5
40°	830.4	<i>843.2</i>	875.2	897.1	898.1
42.5°	778.1	<i>790.4</i>	816.5	848.0	848.0
45°	722.7	<i>734.9</i>	758.9	793.6	797.9
47.5°	668.3	<i>681.1</i>	704.5	739.2	746.1
50°	614.9	<i>626.7</i>	650.1	683.7	694.4
52.5°	559.5	<i>572.3</i>	595.2	626.1	641.6
55°	506.1	<i>514.7</i>	539.7	569.6	586.1
57.5°	450.7	<i>458.7</i>	486.9	512.5	529.6
60°	397.3	<i>407.5</i>	429.3	455.5	475.2
62.5°	346.1	<i>356.8</i>	375.5	398.4	420.8
65°	296.5	<i>304.5</i>	322.7	345.6	365.3
67.5°	248.5	<i>255.5</i>	273.6	289.6	310.4
70°	200.0	<i>209.1</i>	222.4	237.9	251.2
72.5°	161.1	<i>164.8</i>	176.0	187.2	201.1
75°	118.9	<i>125.3</i>	134.4	140.8	148.8
77.5°	85.3	<i>89.1</i>	94.4	99.7	107.2
80°	57.1	<i>58.7</i>	63.5	64.5	70.4
82.5°	34.7	<i>35.7</i>	36.8	37.3	39.5
85°	18.7	<i>18.7</i>	18.7	17.6	17.6
87.5°	10.7	<i>10.7</i>	9.1	7.5	5.3
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)