

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: P556842

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-94-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: P556842
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-93-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND
4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

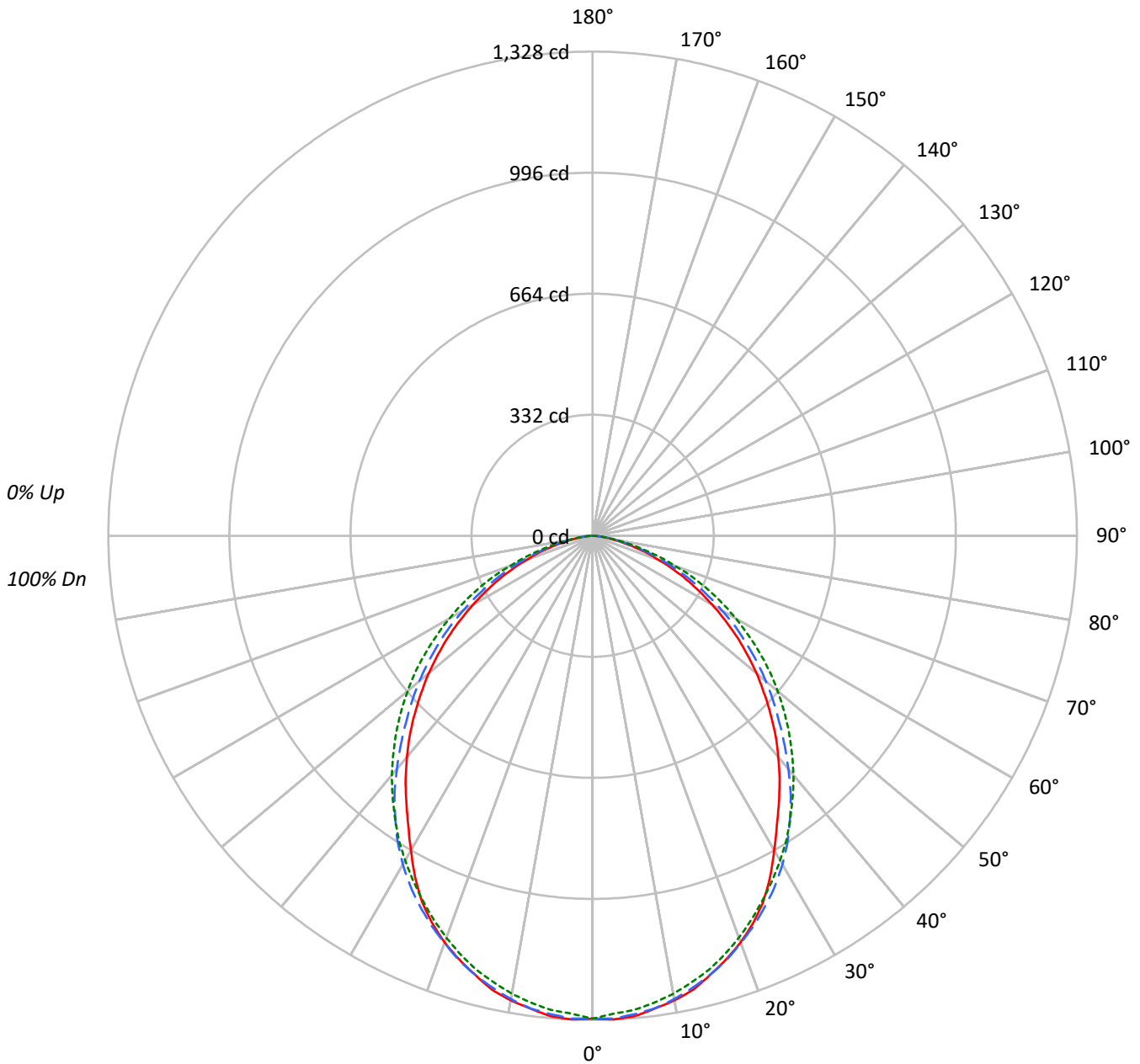
Lumens per Lamp: N/A
Luminaire Lumens: 3062.0 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: FUSL-12-4-LD4-1STD-40-UNV-93-94-EDD-90

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°	3563	3563	3563
5°	3573	3558	3528
10°	3535	3525	3485
15°	3472	3472	3433
20°	3399	3403	3359
25°	3287	3328	3275
30°	3095	3234	3195
35°	2925	3100	3105
40°	2783	2933	3009
45°	2623	2755	2896
50°	2456	2596	2773
55°	2265	2415	2623
60°	2040	2204	2440
65°	1801	1960	2219
70°	1501	1669	1885
75°	1179	1333	1475
80°	843	938	1041
85°	550	550	519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.7	4.1
10°-20°	350.3	11.4
20°-30°	511.8	16.7
30°-40°	581.0	19.0
40°-50°	560.9	18.3
50°-60°	462.7	15.1
60°-70°	308.1	10.1
70°-80°	137.9	4.5
80°-90°	24.7	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°	986.8	32.2
0°-40°	1567.8	51.2
0°-60°	2591.4	84.6
0°-90°	3062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1323	1322	1317	1310	1306	125
15°	1246	1250	1246	1241	1232	351
25°	1107	1116	1121	1113	1103	507
35°	890	902	944	949	945	558
45°	689	701	724	757	761	532
55°	483	491	515	543	559	431
65°	283	290	308	330	348	280
75°	113	120	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°	1324.2	1324.2	1324.2	1324.2	1324.2
2.5°	1327.8	1328.3	1325.3	1317.1	1312.0
5°	1322.7	1322.2	1317.1	1310.0	1305.9
7.5°	1308.0	1309.0	1307.4	1297.3	1291.7
10°	1293.7	1294.2	1290.2	1282.0	1275.4
12.5°	1275.4	1274.9	1269.3	1265.2	1254.5
15°	1246.4	1249.5	1246.4	1240.8	1232.2
17.5°	1218.4	1218.4	1220.5	1210.8	1204.2
20°	1186.9	1188.4	1188.4	1180.8	1173.1
22.5°	1150.2	1154.8	1156.4	1148.2	1139.1
25°	1107.0	1115.7	1120.7	1112.6	1102.9
27.5°	1054.6	1067.8	1083.1	1077.0	1066.3
30°	996.1	1015.4	1040.9	1035.8	1028.2
32.5°	940.7	960.0	995.1	993.0	989.0
35°	890.3	902.5	943.7	948.8	945.2
37.5°	842.5	853.7	892.3	904.0	901.0
40°	792.1	804.3	834.8	855.7	856.7
42.5°	742.2	753.9	778.9	808.9	808.9
45°	689.3	701.0	723.9	757.0	761.1
47.5°	637.4	649.7	672.0	705.1	711.7
50°	586.6	597.8	620.1	652.2	662.4
52.5°	533.7	545.9	567.7	597.3	612.0
55°	482.8	490.9	514.8	543.3	559.1
57.5°	429.9	437.5	464.5	488.9	505.2
60°	379.0	388.7	409.5	434.5	453.3
62.5°	330.2	340.3	358.1	380.0	401.4
65°	282.9	290.5	307.8	329.7	348.5
67.5°	237.1	243.7	261.0	276.2	296.1
70°	190.8	199.4	212.1	226.9	239.6
72.5°	153.6	157.2	167.9	178.6	191.8
75°	113.4	119.6	128.2	134.3	141.9
77.5°	81.4	85.0	90.0	95.1	102.3
80°	54.4	56.0	60.5	61.6	67.2
82.5°	33.1	34.1	35.1	35.6	37.6
85°	17.8	17.8	17.8	16.8	16.8
87.5°	10.2	10.2	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)