

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: P556810

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-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: P556810
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-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

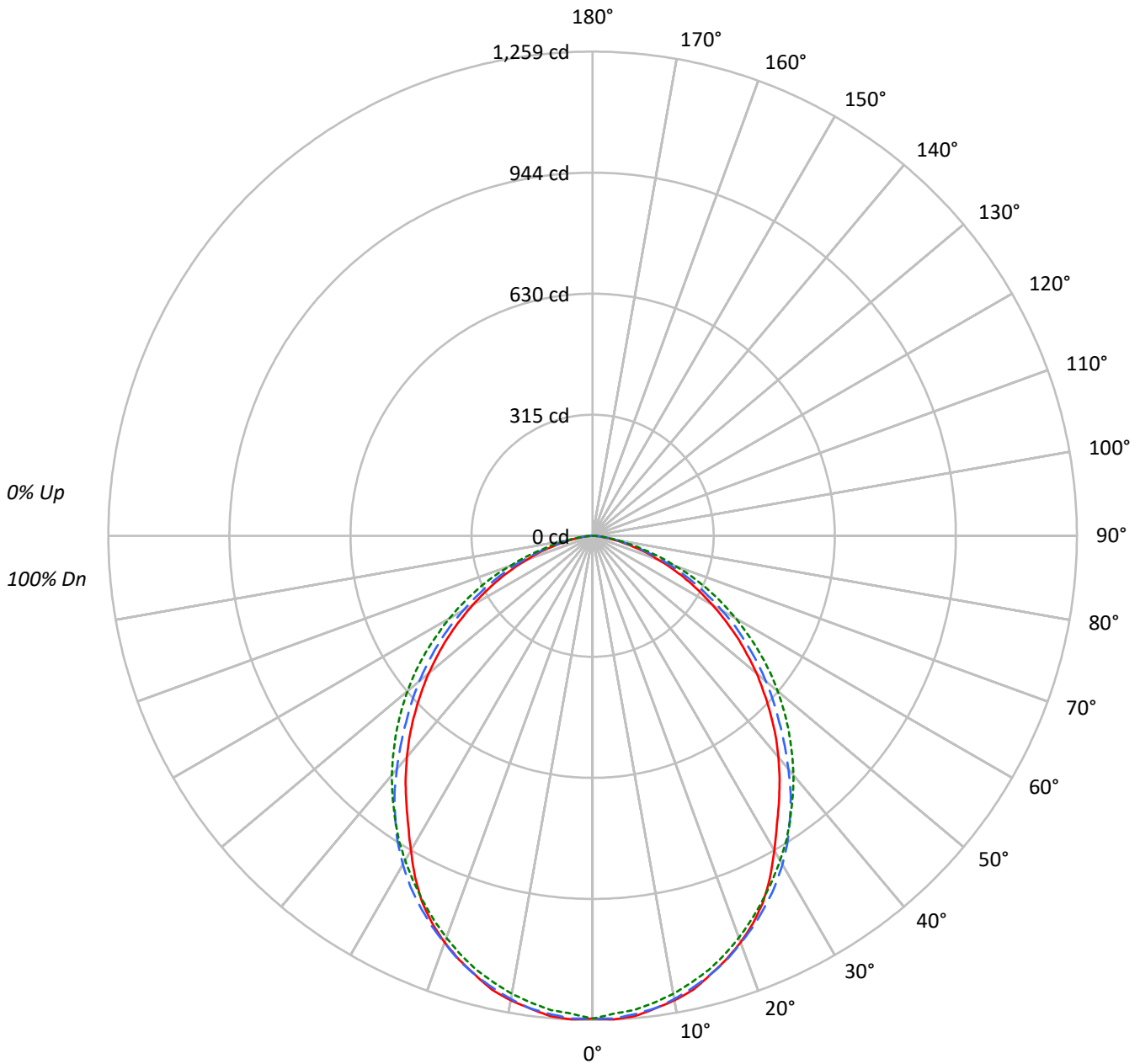
Lumens per Lamp: N/A
Luminaire Lumens: 2903.0 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3379	3379	3379
5°	3387	3373	3344
10°	3351	3342	3304
15°	3292	3292	3254
20°	3222	3227	3185
25°	3116	3155	3105
30°	2935	3066	3029
35°	2773	2939	2944
40°	2638	2780	2853
45°	2487	2612	2746
50°	2328	2461	2629
55°	2147	2290	2487
60°	1934	2090	2313
65°	1708	1858	2104
70°	1423	1582	1788
75°	1119	1263	1399
80°	800	890	987
85°	522	522	491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	4.1
10°-20°	332.1	11.4
20°-30°	485.3	16.7
30°-40°	550.8	19.0
40°-50°	531.7	18.3
50°-60°	438.7	15.1
60°-70°	292.1	10.1
70°-80°	130.7	4.5
80°-90°	23.4	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°	935.6	32.2
0°-40°	1486.4	51.2
0°-60°	2456.8	84.6
0°-90°	2903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2903.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1254	1254	1249	1242	1238	119
15°	1182	1185	1182	1176	1168	333
25°	1050	1058	1062	1055	1046	481
35°	844	856	895	900	896	529
45°	654	665	686	718	722	504
55°	458	465	488	515	530	409
65°	268	275	292	312	330	266
75°	108	113	122	127	135	118
85°	17	17	17	16	16	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1255.5	1255.5	1255.5	1255.5	1255.5
2.5°	1258.8	1259.3	1256.4	1248.7	1243.9
5°	1254.0	1253.5	1248.7	1242.0	1238.1
7.5°	1240.0	1241.0	1239.6	1229.9	1224.6
10°	1226.5	1227.0	1223.2	1215.4	1209.2
12.5°	1209.2	1208.7	1203.4	1199.5	1189.4
15°	1181.7	1184.6	1181.7	1176.4	1168.2
17.5°	1155.2	1155.2	1157.1	1147.9	1141.6
20°	1125.2	1126.7	1126.7	1119.5	1112.2
22.5°	1090.5	1094.9	1096.3	1088.6	1079.9
25°	1049.5	1057.7	1062.5	1054.8	1045.7
27.5°	999.8	1012.4	1026.9	1021.1	1010.9
30°	944.4	962.7	986.8	982.0	974.8
32.5°	891.8	910.1	943.4	941.5	937.6
35°	844.1	855.6	894.7	899.5	896.1
37.5°	798.7	809.3	846.0	857.1	854.2
40°	751.0	762.5	791.5	811.3	812.2
42.5°	703.7	714.8	738.4	766.9	766.9
45°	653.5	664.6	686.3	717.7	721.5
47.5°	604.3	615.9	637.1	668.5	674.8
50°	556.1	566.7	587.9	618.3	628.0
52.5°	506.0	517.5	538.3	566.2	580.2
55°	457.7	465.4	488.1	515.1	530.1
57.5°	407.6	414.8	440.4	463.5	478.9
60°	359.3	368.5	388.3	411.9	429.7
62.5°	313.0	322.7	339.6	360.3	380.5
65°	268.2	275.4	291.8	312.5	330.4
67.5°	224.8	231.0	247.4	261.9	280.7
70°	180.9	189.1	201.1	215.1	227.2
72.5°	145.7	149.0	159.2	169.3	181.8
75°	107.6	113.3	121.5	127.3	134.6
77.5°	77.2	80.5	85.4	90.2	96.9
80°	51.6	53.1	57.4	58.4	63.7
82.5°	31.4	32.3	33.3	33.8	35.7
85°	16.9	16.9	16.9	15.9	15.9
87.5°	9.6	9.6	8.2	6.8	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)