

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: P556804

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-81-86-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: P556804
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-81-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

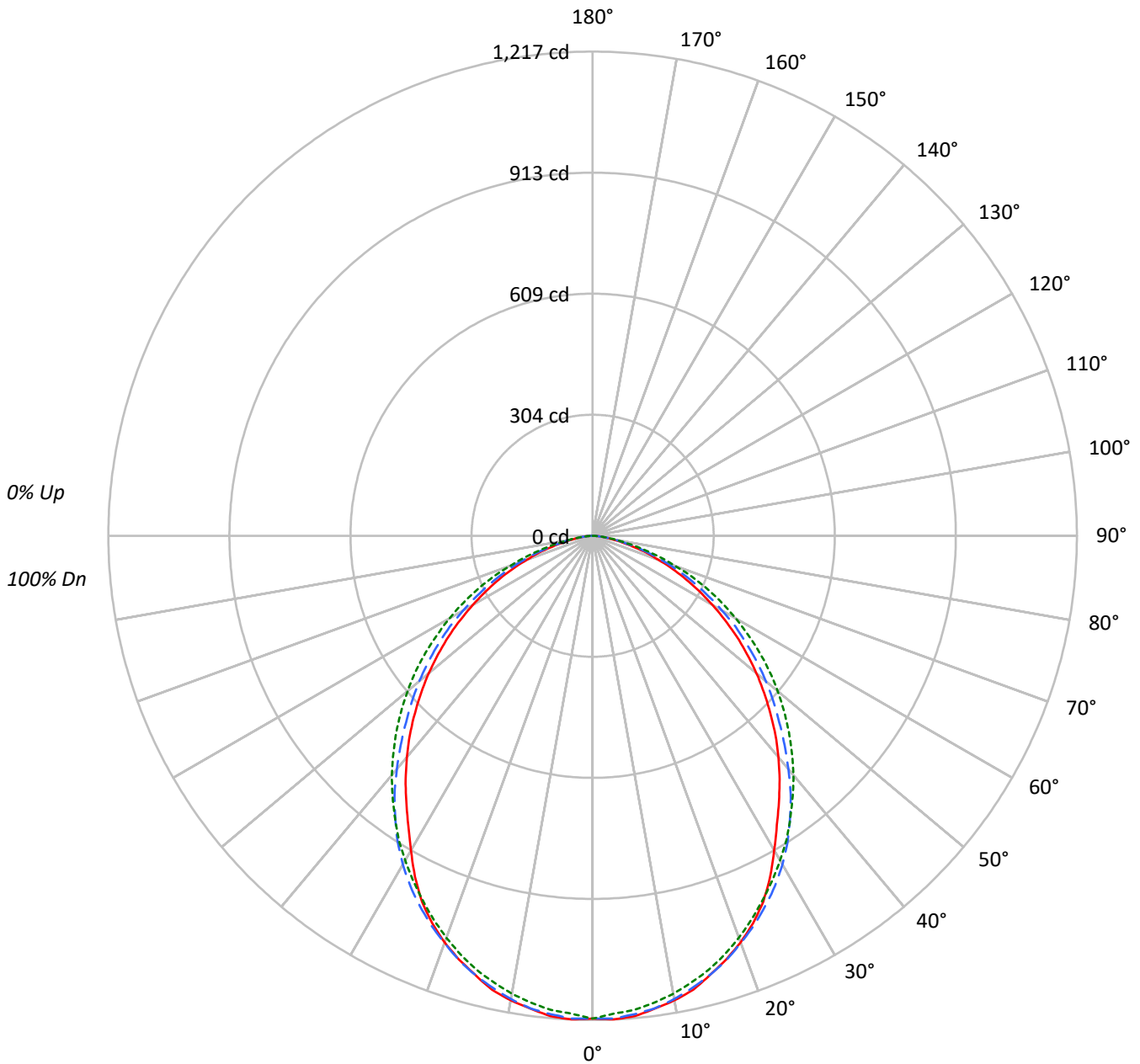
Lumens per Lamp: N/A
Luminaire Lumens: 2806.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3266	3266	3266
5°	3274	3260	3233
10°	3240	3231	3194
15°	3182	3182	3146
20°	3115	3119	3079
25°	3012	3049	3001
30°	2836	2964	2928
35°	2680	2841	2846
40°	2550	2687	2758
45°	2404	2525	2654
50°	2250	2379	2541
55°	2076	2213	2404
60°	1869	2020	2236
65°	1650	1796	2033
70°	1375	1530	1728
75°	1081	1222	1353
80°	773	860	953
85°	503	503	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	4.1
10°-20°	321.0	11.4
20°-30°	469.1	16.7
30°-40°	532.4	19.0
40°-50°	514.0	18.3
50°-60°	424.0	15.1
60°-70°	282.3	10.1
70°-80°	126.4	4.5
80°-90°	22.6	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°	904.3	32.2
0°-40°	1436.7	51.2
0°-60°	2374.7	84.6
0°-90°	2806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2806.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1214	1214	1214	1214	1214	
5°	1212	1212	1207	1200	1197	115
15°	1142	1145	1142	1137	1129	322
25°	1014	1022	1027	1020	1011	465
35°	816	827	865	870	866	511
45°	632	642	663	694	697	487
55°	442	450	472	498	512	395
65°	259	266	282	302	319	257
75°	104	110	118	123	130	114
85°	16	16	16	15	15	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1213.5	1213.5	1213.5	1213.5	1213.5
2.5°	1216.8	1217.3	1214.5	1207.0	1202.3
5°	1212.1	1211.7	1207.0	1200.5	1196.7
7.5°	1198.6	1199.5	1198.1	1188.8	1183.7
10°	1185.6	1186.0	1182.3	1174.8	1168.8
12.5°	1168.8	1168.3	1163.2	1159.4	1149.7
15°	1142.2	1145.0	1142.2	1137.1	1129.1
17.5°	1116.6	1116.6	1118.4	1109.6	1103.5
20°	1087.6	1089.0	1089.0	1082.1	1075.1
22.5°	1054.1	1058.3	1059.7	1052.2	1043.8
25°	1014.5	1022.4	1027.0	1019.6	1010.7
27.5°	966.4	978.6	992.5	986.9	977.2
30°	912.8	930.5	953.8	949.2	942.2
32.5°	862.0	879.7	911.9	910.0	906.3
35°	815.9	827.0	864.8	869.5	866.2
37.5°	772.0	782.3	817.7	828.4	825.6
40°	725.9	737.1	765.0	784.2	785.1
42.5°	680.2	690.9	713.8	741.3	741.3
45°	631.7	642.4	663.4	693.7	697.4
47.5°	584.2	595.3	615.9	646.2	652.2
50°	537.5	547.8	568.3	597.7	607.0
52.5°	489.0	500.2	520.3	547.3	560.8
55°	442.4	449.9	471.8	497.9	512.4
57.5°	393.9	400.9	425.6	448.0	462.9
60°	347.3	356.2	375.3	398.1	415.4
62.5°	302.6	311.9	328.2	348.3	367.8
65°	259.2	266.2	282.1	302.1	319.3
67.5°	217.2	223.3	239.2	253.1	271.3
70°	174.8	182.8	194.4	207.9	219.6
72.5°	140.8	144.1	153.8	163.6	175.8
75°	104.0	109.6	117.5	123.1	130.1
77.5°	74.6	77.9	82.5	87.2	93.7
80°	49.9	51.3	55.5	56.4	61.5
82.5°	30.3	31.2	32.2	32.6	34.5
85°	16.3	16.3	16.3	15.4	15.4
87.5°	9.3	9.3	7.9	6.5	4.7
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)