

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: P556770

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-93-85-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: P556770  
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-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

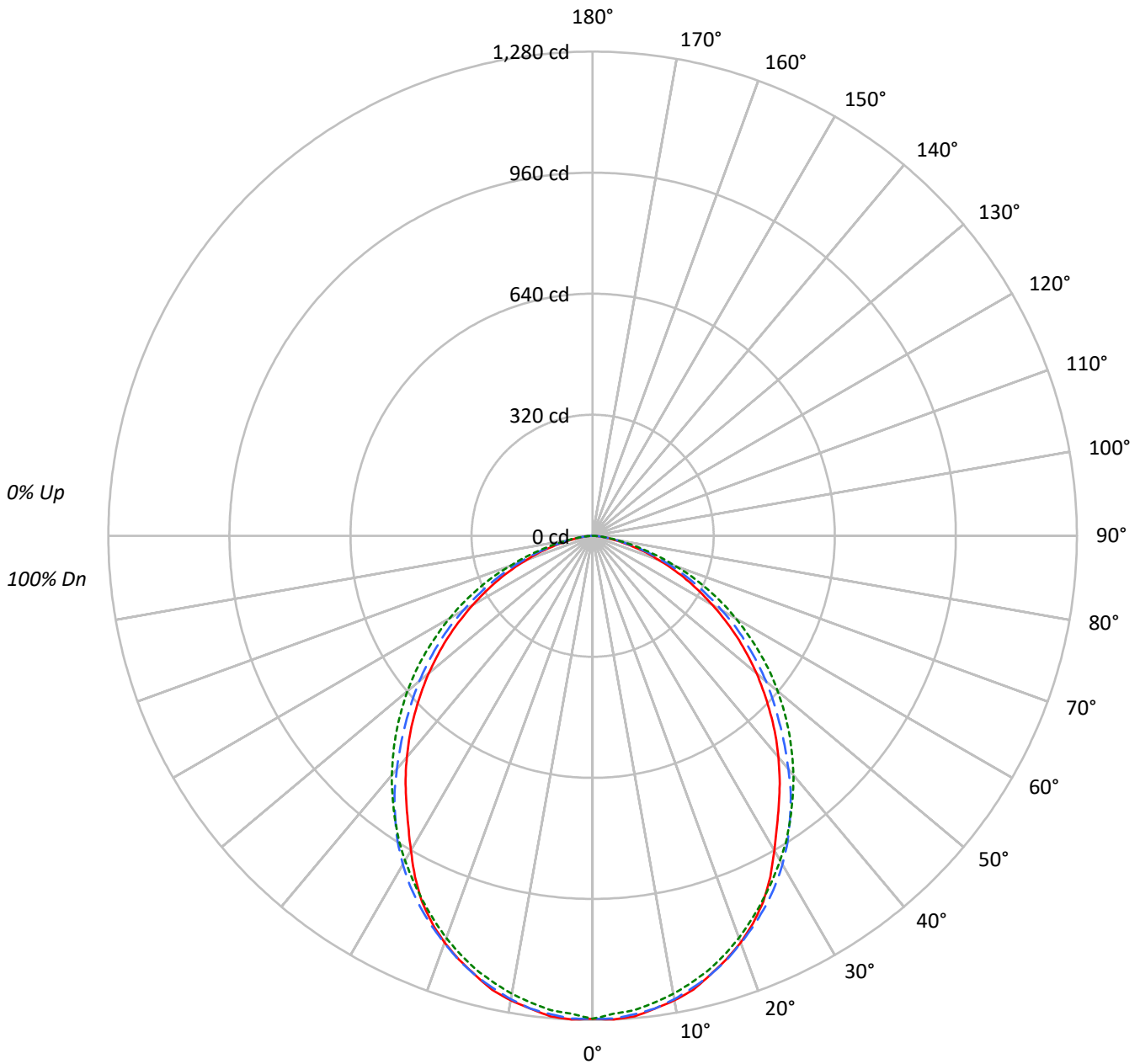
Lumens per Lamp: N/A  
Luminaire Lumens: 2952.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3436	3436	3436
5°	3445	3430	3401
10°	3408	3399	3360
15°	3348	3348	3309
20°	3277	3281	3239
25°	3169	3208	3157
30°	2984	3118	3080
35°	2820	2989	2994
40°	2682	2827	2901
45°	2529	2656	2792
50°	2367	2503	2673
55°	2183	2328	2529
60°	1967	2125	2352
65°	1736	1889	2139
70°	1447	1609	1817
75°	1137	1285	1422
80°	814	905	1003
85°	531	531	500



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.2	4.1
10°-20°	337.7	11.4
20°-30°	493.5	16.7
30°-40°	560.1	19.0
40°-50°	540.7	18.3
50°-60°	446.1	15.1
60°-70°	297.0	10.1
70°-80°	132.9	4.5
80°-90°	23.8	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°	951.3	32.2
0°-40°	1511.5	51.2
0°-60°	2498.3	84.6
0°-90°	2952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2952.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1277	1277	1277	1277	1277	
5°	1275	1275	1270	1263	1259	121
15°	1202	1205	1202	1196	1188	339
25°	1067	1076	1080	1073	1063	489
35°	858	870	910	915	911	538
45°	665	676	698	730	734	513
55°	465	473	496	524	539	415
65°	273	280	297	318	336	270
75°	109	115	124	130	137	120
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°	1276.7	1276.7	1276.7	1276.7	1276.7
2.5°	1280.1	1280.6	1277.6	1269.8	1264.9
5°	1275.2	1274.7	1269.8	1262.9	1259.0
7.5°	1261.0	1262.0	1260.5	1250.7	1245.3
10°	1247.2	1247.7	1243.8	1236.0	1229.6
12.5°	1229.6	1229.1	1223.7	1219.8	1209.5
15°	1201.6	1204.6	1201.6	1196.2	1187.9
17.5°	1174.6	1174.6	1176.6	1167.3	1160.9
20°	1144.2	1145.7	1145.7	1138.4	1131.0
22.5°	1108.9	1113.3	1114.8	1107.0	1098.1
25°	1067.2	1075.6	1080.5	1072.6	1063.3
27.5°	1016.7	1029.5	1044.2	1038.3	1028.0
30°	960.3	979.0	1003.5	998.6	991.2
32.5°	906.9	925.5	959.3	957.4	953.5
35°	858.3	870.1	909.8	914.7	911.3
37.5°	812.2	823.0	860.3	871.5	868.6
40°	763.6	775.4	804.8	825.0	825.9
42.5°	715.6	726.9	750.9	779.8	779.8
45°	664.6	675.9	697.9	729.8	733.7
47.5°	614.5	626.3	647.9	679.8	686.2
50°	565.5	576.3	597.9	628.8	638.6
52.5°	514.5	526.3	547.4	575.8	590.0
55°	465.4	473.3	496.3	523.8	539.0
57.5°	414.4	421.8	447.8	471.3	487.0
60°	365.4	374.7	394.8	418.9	437.0
62.5°	318.3	328.1	345.3	366.4	387.0
65°	272.7	280.1	296.7	317.8	336.0
67.5°	228.6	234.9	251.6	266.3	285.4
70°	183.9	192.3	204.5	218.7	231.0
72.5°	148.1	151.6	161.9	172.2	184.9
75°	109.4	115.3	123.6	129.5	136.8
77.5°	78.5	81.9	86.8	91.7	98.6
80°	52.5	54.0	58.4	59.3	64.7
82.5°	31.9	32.9	33.8	34.3	36.3
85°	17.2	17.2	17.2	16.2	16.2
87.5°	9.8	9.8	8.3	6.9	4.9
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)