

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: P556697

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-82-88-EDD**

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: P556697  
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-30-UNV-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

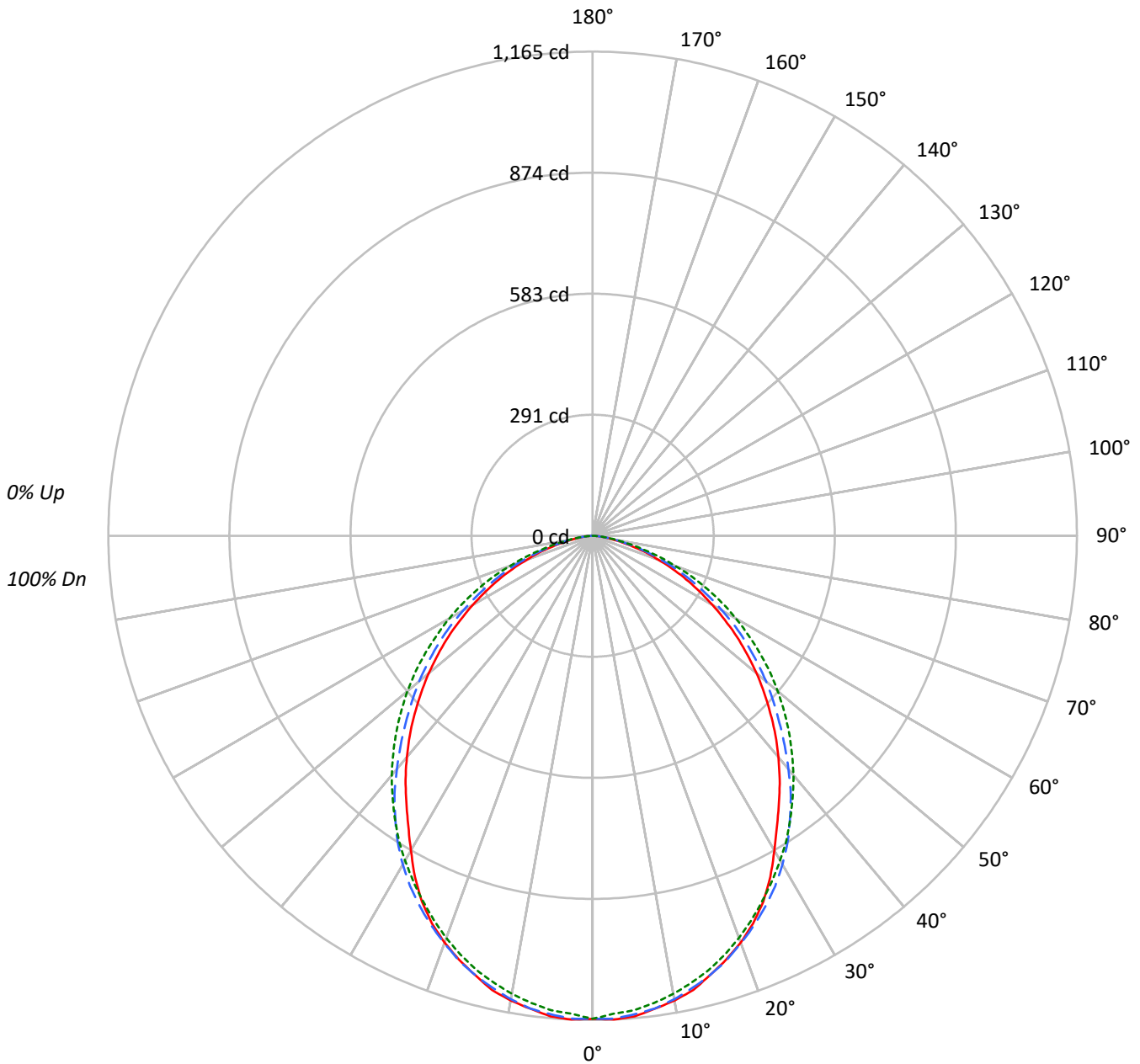
Lumens per Lamp: N/A  
Luminaire Lumens: 2687.0 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3127	3127	3127
5°	3135	3122	3096
10°	3102	3093	3058
15°	3047	3047	3012
20°	2983	2987	2948
25°	2884	2920	2874
30°	2716	2838	2803
35°	2567	2720	2725
40°	2442	2573	2641
45°	2302	2418	2542
50°	2155	2278	2434
55°	1988	2120	2302
60°	1790	1934	2141
65°	1580	1720	1947
70°	1317	1465	1655
75°	1036	1170	1295
80°	741	823	913
85°	482	482	454



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.4	4.1
10°-20°	307.4	11.4
20°-30°	449.2	16.7
30°-40°	509.8	19.0
40°-50°	492.2	18.3
50°-60°	406.0	15.1
60°-70°	270.4	10.1
70°-80°	121.0	4.5
80°-90°	21.6	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°	865.9	32.2
0°-40°	1375.8	51.2
0°-60°	2274.0	84.6
0°-90°	2687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2687.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1161	1160	1156	1150	1146	110
15°	1094	1096	1094	1089	1081	308
25°	971	979	984	976	968	445
35°	781	792	828	833	830	490
45°	605	615	635	664	668	467
55°	424	431	452	477	491	378
65°	248	255	270	289	306	246
75°	100	105	112	118	125	109
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1162.1	1162.1	1162.1	1162.1	1162.1
2.5°	1165.2	1165.6	1163.0	1155.8	1151.3
5°	1160.7	1160.3	1155.8	1149.6	1146.0
7.5°	1147.8	1148.7	1147.3	1138.4	1133.5
10°	1135.3	1135.7	1132.1	1125.0	1119.2
12.5°	1119.2	1118.8	1113.8	1110.3	1100.9
15°	1093.8	1096.4	1093.8	1088.8	1081.3
17.5°	1069.2	1069.2	1071.0	1062.5	1056.7
20°	1041.5	1042.9	1042.9	1036.2	1029.5
22.5°	1009.4	1013.4	1014.7	1007.6	999.6
25°	971.4	979.0	983.5	976.3	967.9
27.5°	925.5	937.1	950.5	945.1	935.7
30°	874.1	891.1	913.4	908.9	902.2
32.5°	825.4	842.4	873.2	871.4	867.9
35°	781.3	792.0	828.1	832.6	829.5
37.5°	739.3	749.1	783.0	793.3	790.6
40°	695.1	705.8	732.6	750.9	751.8
42.5°	651.3	661.6	683.5	709.8	709.8
45°	604.9	615.2	635.3	664.3	667.9
47.5°	559.4	570.1	589.7	618.8	624.6
50°	514.7	524.6	544.2	572.3	581.3
52.5°	468.3	479.0	498.2	524.1	537.1
55°	423.7	430.8	451.8	476.8	490.6
57.5°	377.2	383.9	407.6	429.0	443.3
60°	332.6	341.1	359.4	381.3	397.8
62.5°	289.7	298.7	314.3	333.5	352.2
65°	248.2	254.9	270.1	289.3	305.8
67.5°	208.0	213.8	229.0	242.4	259.8
70°	167.4	175.0	186.2	199.1	210.3
72.5°	134.8	137.9	147.3	156.7	168.3
75°	99.6	104.9	112.5	117.9	124.6
77.5°	71.4	74.6	79.0	83.5	89.7
80°	47.8	49.1	53.1	54.0	58.9
82.5°	29.0	29.9	30.8	31.3	33.0
85°	15.6	15.6	15.6	14.7	14.7
87.5°	8.9	8.9	7.6	6.3	4.5
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)