

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: P488638

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD-90**

Issue Date: 3/11/2021

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: P488638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)
Test Lab: INNOVATION CENTER
Issue Date: 3/11/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

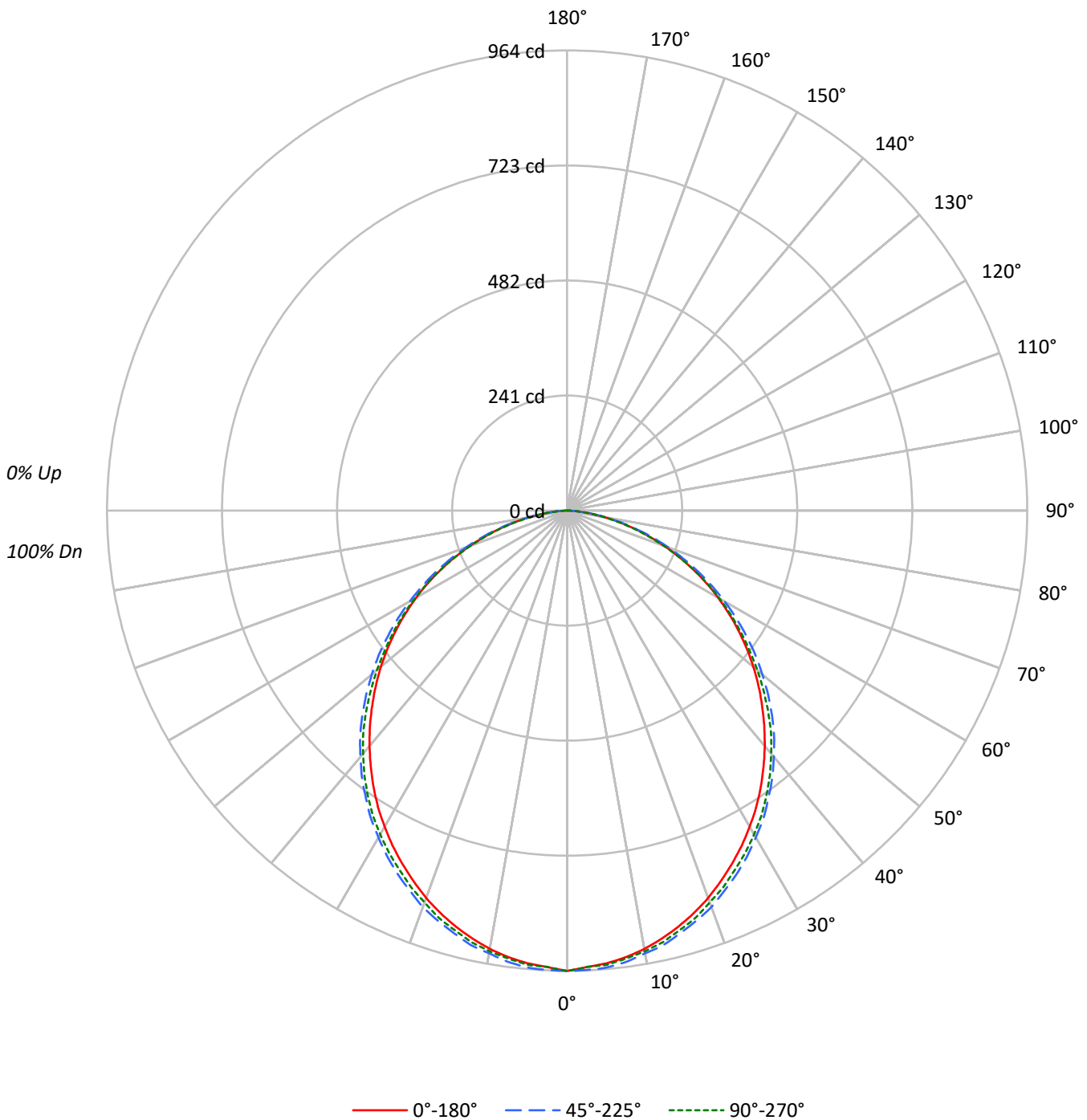
Lumens per Lamp: N/A
Luminaire Lumens: 2535.8 lumens
Efficiency: N/A
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	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	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2595	2595	2595
5°	2572	2596	2580
10°	2548	2574	2561
15°	2513	2553	2535
20°	2473	2532	2501
25°	2425	2495	2467
30°	2376	2457	2434
35°	2323	2415	2392
40°	2262	2366	2336
45°	2199	2310	2266
50°	2133	2236	2177
55°	2055	2151	2085
60°	1968	2049	1986
65°	1854	1926	1855
70°	1707	1775	1688
75°	1502	1570	1480
80°	1221	1274	1207
85°	849	905	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	3.6
10°-20°	257.4	10.2
20°-30°	383.9	15.1
30°-40°	455.0	17.9
40°-50°	460.3	18.2
50°-60°	402.0	15.9
60°-70°	293.8	11.6
70°-80°	156.3	6.2
80°-90°	36.1	1.4
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°	732.2	28.9
0°-40°	1187.2	46.8
0°-60°	2049.5	80.8
0°-90°	2535.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2535.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	952	954	961	963	955	90
15°	902	908	916	922	910	254
25°	817	827	840	844	831	376
35°	707	718	735	740	728	442
45°	578	588	607	607	595	446
55°	438	447	458	452	444	392
65°	291	297	302	296	291	288
75°	144	148	151	146	142	154
85°	28	28	29	30	29	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	964.5	964.5	964.5	964.5	964.5
2.5°	957.0	960.1	963.3	964.7	956.9
5°	952.0	953.8	960.9	963.1	955.0
7.5°	943.7	946.4	953.4	954.4	946.5
10°	932.5	937.3	941.9	946.9	937.4
12.5°	918.1	924.6	932.5	933.4	926.1
15°	901.9	908.0	916.5	922.0	910.1
17.5°	883.8	889.7	900.7	901.7	894.5
20°	863.6	870.9	884.1	886.4	873.5
22.5°	840.7	850.5	861.5	863.7	854.2
25°	816.7	826.8	840.4	843.5	830.8
27.5°	791.6	801.2	816.6	818.8	808.1
30°	764.6	773.7	790.6	794.3	783.3
32.5°	737.3	746.4	765.1	768.2	757.5
35°	707.0	718.0	735.0	740.1	728.2
37.5°	676.0	686.8	706.1	710.7	697.8
40°	644.0	654.6	673.6	677.4	665.1
42.5°	611.2	621.8	642.1	642.8	632.5
45°	577.7	588.0	606.9	607.4	595.4
47.5°	543.8	554.1	571.0	569.1	557.8
50°	509.4	519.2	534.0	530.2	520.0
52.5°	473.8	483.4	497.3	491.1	481.6
55°	438.0	446.9	458.5	451.9	444.5
57.5°	402.0	410.9	419.9	413.1	406.7
60°	365.6	373.4	380.8	373.9	369.0
62.5°	328.6	335.3	341.7	335.1	330.5
65°	291.2	297.2	302.4	296.4	291.4
67.5°	254.0	259.1	263.9	257.7	252.5
70°	216.9	221.2	225.6	219.2	214.5
72.5°	180.2	184.0	187.9	181.7	177.6
75°	144.5	147.8	151.0	145.5	142.3
77.5°	110.4	113.3	115.5	111.9	108.8
80°	78.8	80.9	82.2	80.8	77.9
82.5°	50.6	52.2	52.9	52.8	50.8
85°	27.5	28.0	29.3	29.6	28.6
87.5°	10.7	11.4	11.7	12.6	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)