

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: P489652

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-35-120-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: P489652  
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-24-4-INS-A19156-LD4-3HI-35-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

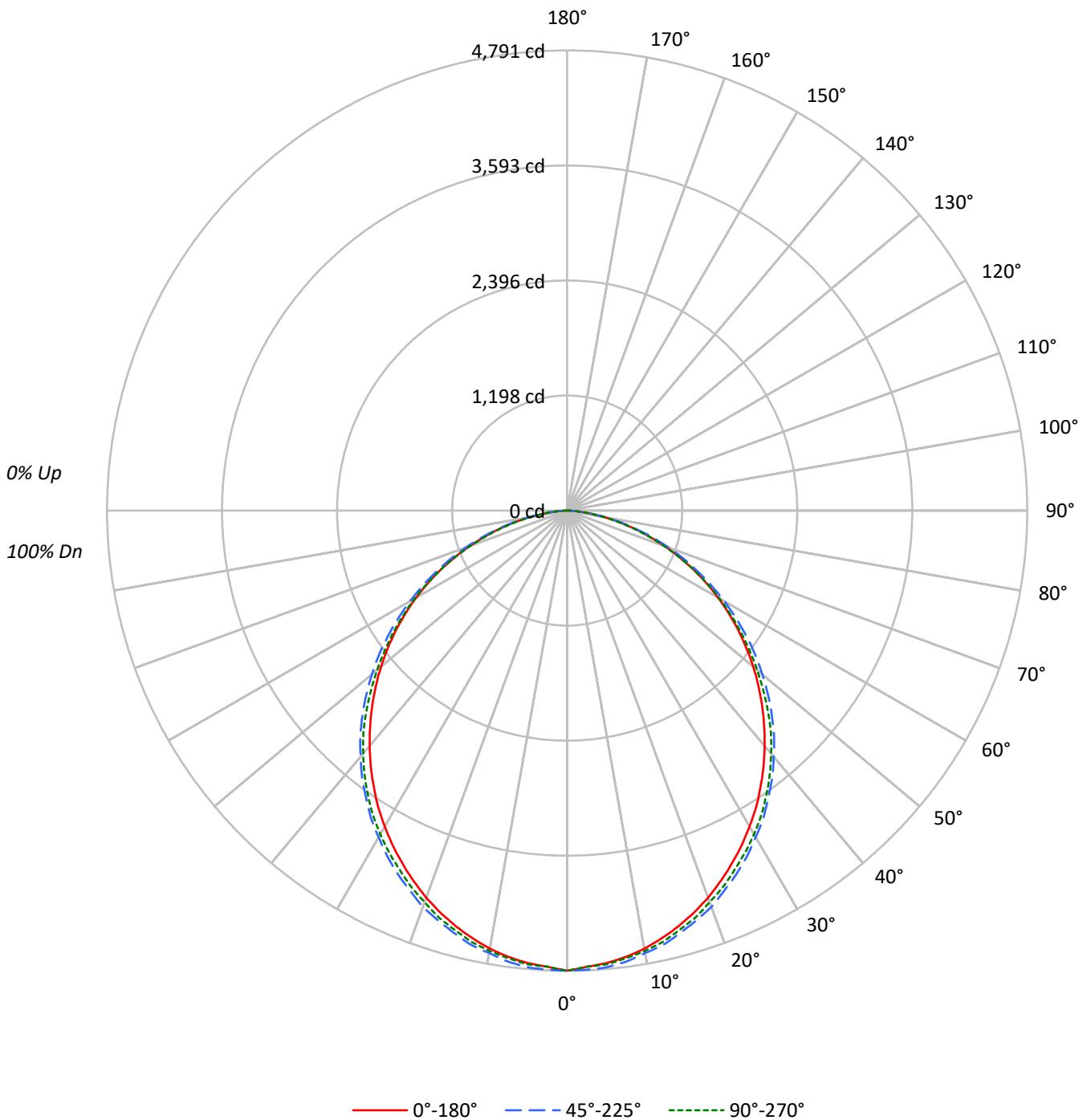
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12594.8 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 129.6  
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				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°	6446	6446	6446
5°	6386	6446	6406
10°	6328	6392	6361
15°	6240	6341	6296
20°	6142	6288	6212
25°	6022	6197	6126
30°	5901	6101	6045
35°	5768	5996	5941
40°	5618	5876	5802
45°	5460	5735	5627
50°	5296	5552	5407
55°	5104	5343	5179
60°	4886	5089	4932
65°	4605	4782	4608
70°	4237	4408	4190
75°	3731	3900	3674
80°	3032	3164	2997
85°	2112	2249	2197



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	451.2	3.6
10°-20°	1278.6	10.2
20°-30°	1906.9	15.1
30°-40°	2259.7	17.9
40°-50°	2286.5	18.2
50°-60°	1996.9	15.9
60°-70°	1459.2	11.6
70°-80°	776.4	6.2
80°-90°	179.4	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°	3636.6	28.9
0°-40°	5896.3	46.8
0°-60°	10179.7	80.8
0°-90°	12594.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12594.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4791	4791	4791	4791	4791	
5°	4728	4737	4773	4784	4743	448
15°	4480	4510	4552	4580	4520	1263
25°	4056	4106	4174	4190	4126	1869
35°	3511	3566	3651	3676	3617	2196
45°	2870	2920	3014	3017	2957	2214
55°	2176	2220	2278	2245	2208	1945
65°	1446	1476	1502	1472	1448	1431
75°	718	734	750	723	707	763
85°	137	139	146	147	142	173
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4790.6	4790.6	4790.6	4790.6	4790.6
2.5°	4753.2	4768.7	4784.6	4791.6	4752.7
5°	4728.2	4737.2	4772.6	4783.6	4743.2
7.5°	4687.3	4700.8	4735.2	4740.2	4701.3
10°	4631.4	4655.4	4678.3	4703.3	4655.8
12.5°	4560.0	4592.5	4631.4	4635.9	4599.9
15°	4479.7	4509.6	4552.0	4579.5	4520.1
17.5°	4389.8	4418.8	4473.7	4478.7	4442.7
20°	4289.5	4325.4	4391.3	4402.8	4338.4
22.5°	4175.7	4224.1	4279.0	4290.0	4242.6
25°	4056.4	4106.3	4174.2	4189.7	4126.3
27.5°	3931.6	3979.5	4055.9	4066.9	4013.5
30°	3797.9	3842.8	3926.6	3945.1	3890.7
32.5°	3662.1	3707.0	3799.8	3815.3	3762.4
35°	3511.4	3566.3	3650.6	3676.1	3616.7
37.5°	3357.6	3411.0	3506.9	3529.8	3465.9
40°	3198.4	3251.3	3345.6	3364.6	3303.2
42.5°	3035.7	3088.6	3189.4	3192.4	3141.5
45°	2869.5	2920.4	3014.2	3016.7	2957.3
47.5°	2700.8	2752.2	2836.0	2826.6	2770.6
50°	2530.1	2579.0	2652.4	2633.4	2583.0
52.5°	2353.4	2400.8	2470.2	2439.2	2391.8
55°	2175.7	2219.6	2277.5	2244.6	2207.6
57.5°	1996.5	2040.9	2085.3	2051.9	2020.0
60°	1815.8	1854.8	1891.2	1857.2	1832.8
62.5°	1632.1	1665.6	1697.0	1664.6	1641.6
65°	1446.5	1475.9	1501.9	1471.9	1447.5
67.5°	1261.8	1286.7	1310.7	1279.8	1254.3
70°	1077.1	1098.6	1120.5	1088.6	1065.1
72.5°	894.9	913.9	933.4	902.4	882.0
75°	717.7	734.2	750.2	722.7	706.8
77.5°	548.5	562.5	573.5	556.0	540.6
80°	391.3	401.8	408.3	401.3	386.8
82.5°	251.6	259.0	262.5	262.0	252.6
85°	136.8	139.3	145.7	147.2	142.3
87.5°	52.9	56.4	57.9	62.4	57.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)