

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: P489728

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-50-120-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: P489728  
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-LD4-5HI-50-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

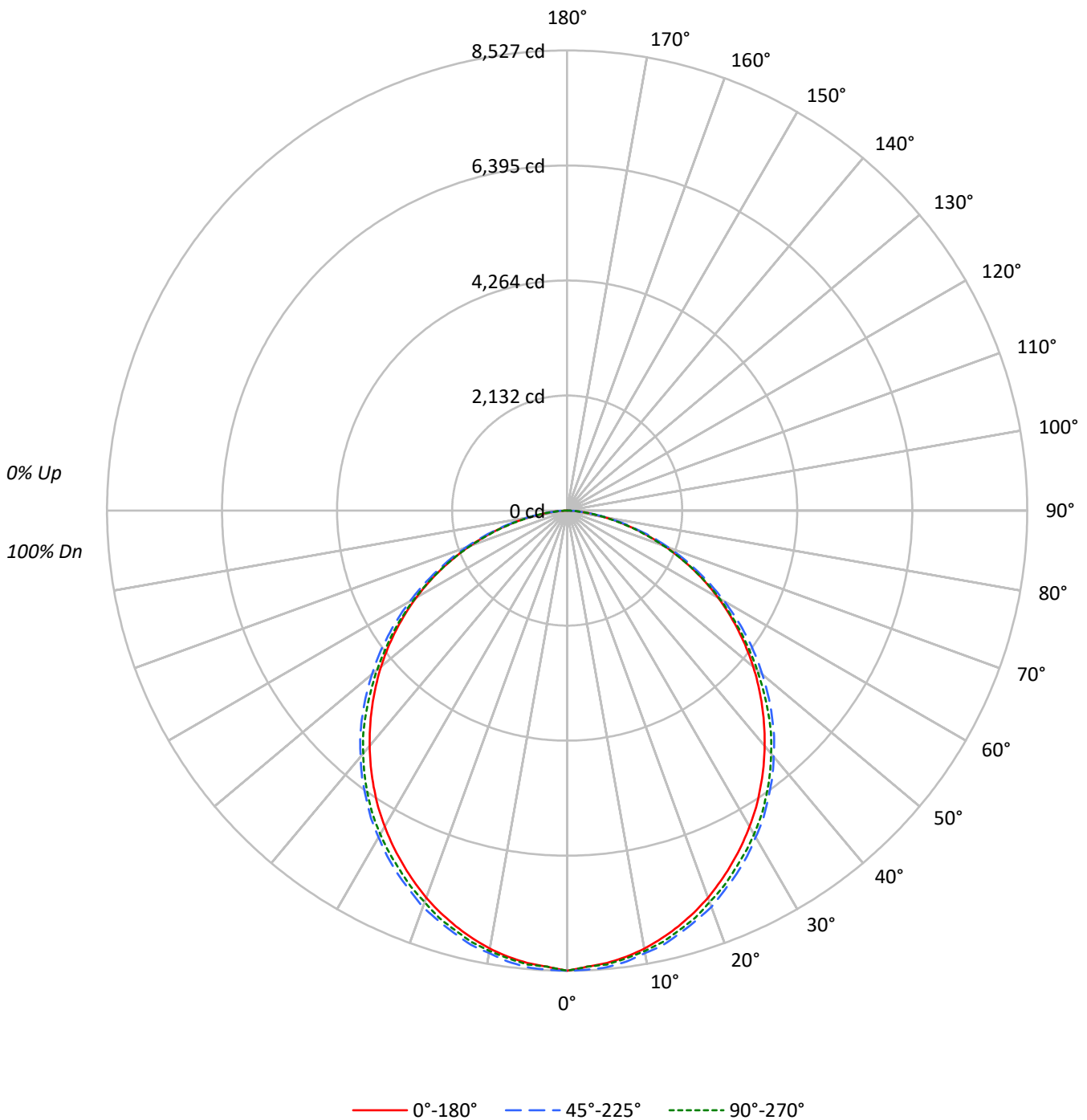
Lumens per Lamp: N/A  
Luminaire Lumens: 22417.6 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 216  
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°	11473	11473	11473
5°	11367	11473	11403
10°	11263	11377	11322
15°	11107	11286	11207
20°	10932	11191	11057
25°	10719	11030	10903
30°	10502	10858	10759
35°	10266	10673	10574
40°	9999	10459	10327
45°	9718	10209	10016
50°	9426	9882	9624
55°	9084	9509	9218
60°	8697	9058	8779
65°	8197	8511	8202
70°	7542	7846	7458
75°	6641	6942	6540
80°	5397	5631	5335
85°	3758	4005	3909



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	803.1	3.6
10°-20°	2275.7	10.2
20°-30°	3394.1	15.1
30°-40°	4022.0	17.9
40°-50°	4069.7	18.2
50°-60°	3554.3	15.9
60°-70°	2597.3	11.6
70°-80°	1382.0	6.2
80°-90°	319.4	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°	6472.9	28.9
0°-40°	10494.9	46.8
0°-60°	18118.9	80.8
0°-90°	22417.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22417.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8527	8527	8527	8527	8527	
5°	8416	8432	8495	8514	8442	798
15°	7973	8027	8102	8151	8045	2248
25°	7220	7309	7430	7457	7344	3326
35°	6250	6348	6498	6543	6437	3909
45°	5107	5198	5365	5370	5264	3940
55°	3872	3951	4054	3995	3929	3462
65°	2575	2627	2673	2620	2576	2548
75°	1278	1307	1335	1286	1258	1358
85°	243	248	259	262	253	308
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8526.9	8526.9	8526.9	8526.9	8526.9
2.5°	8460.2	8487.8	8516.2	8528.6	8459.3
5°	8415.8	8431.8	8494.9	8514.4	8442.5
7.5°	8343.0	8366.9	8428.2	8437.1	8367.8
10°	8243.5	8286.1	8327.0	8371.4	8287.0
12.5°	8116.4	8174.2	8243.5	8251.5	8187.5
15°	7973.4	8026.7	8102.2	8151.1	8045.3
17.5°	7813.5	7865.0	7962.7	7971.6	7907.6
20°	7634.9	7698.9	7816.1	7836.6	7722.0
22.5°	7432.3	7518.5	7616.2	7635.8	7551.4
25°	7220.0	7308.9	7429.7	7457.2	7344.4
27.5°	6997.9	7083.2	7219.1	7238.7	7143.6
30°	6759.8	6839.8	6989.0	7021.9	6925.1
32.5°	6518.2	6598.1	6763.4	6790.9	6696.8
35°	6249.9	6347.6	6497.8	6543.1	6437.3
37.5°	5976.3	6071.3	6241.9	6282.8	6169.0
40°	5692.9	5787.0	5954.9	5988.7	5879.4
42.5°	5403.2	5497.4	5676.9	5682.2	5591.6
45°	5107.4	5198.0	5365.0	5369.5	5263.8
47.5°	4807.1	4898.6	5047.9	5031.0	4931.5
50°	4503.3	4590.4	4721.0	4687.2	4597.5
52.5°	4188.8	4273.2	4396.7	4341.6	4257.2
55°	3872.5	3950.7	4053.8	3995.1	3929.4
57.5°	3553.6	3632.7	3711.7	3652.2	3595.4
60°	3232.0	3301.3	3366.1	3305.7	3262.2
62.5°	2905.1	2964.6	3020.6	2962.8	2921.9
65°	2574.6	2627.0	2673.2	2619.9	2576.4
67.5°	2245.9	2290.3	2332.9	2277.9	2232.5
70°	1917.2	1955.4	1994.5	1937.6	1895.8
72.5°	1592.9	1626.7	1661.3	1606.2	1569.8
75°	1277.5	1306.8	1335.3	1286.4	1258.0
77.5°	976.4	1001.2	1020.8	989.7	962.1
80°	696.5	715.2	726.7	714.3	688.5
82.5°	447.8	461.1	467.3	466.4	449.5
85°	243.4	247.9	259.4	262.1	253.2
87.5°	94.2	100.4	103.1	111.0	102.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)