

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: P489718

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-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: P489718  
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-20-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

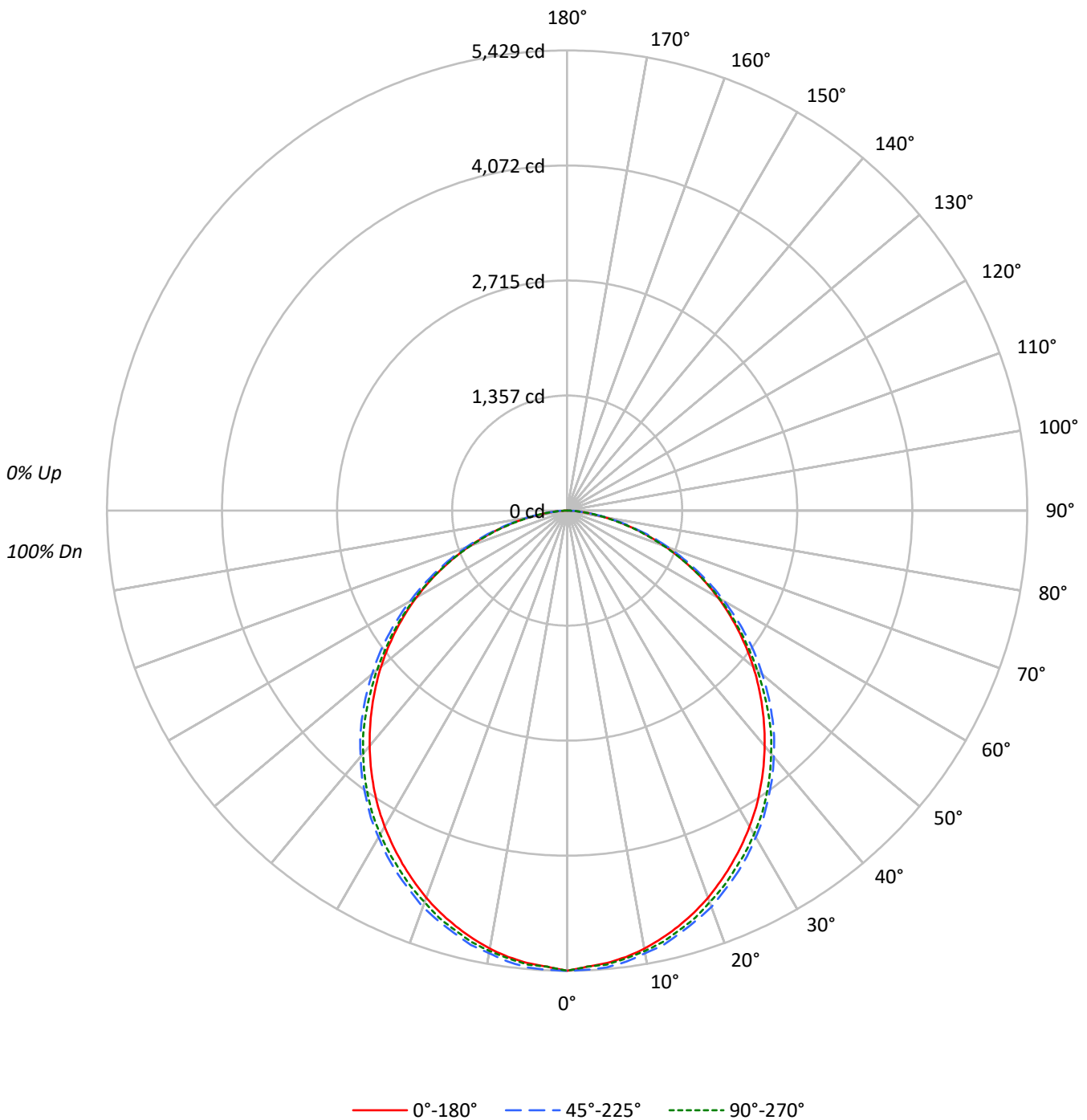
Lumens per Lamp: N/A  
Luminaire Lumens: 14274.1 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	7305	7305	7305
5°	7238	7306	7260
10°	7171	7244	7209
15°	7072	7186	7136
20°	6961	7126	7040
25°	6825	7023	6943
30°	6687	6914	6851
35°	6536	6796	6733
40°	6367	6660	6575
45°	6188	6500	6377
50°	6002	6292	6128
55°	5784	6055	5869
60°	5538	5768	5590
65°	5219	5419	5223
70°	4802	4996	4749
75°	4229	4420	4164
80°	3436	3585	3397
85°	2393	2550	2489



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	511.3	3.6
10°-20°	1449.0	10.2
20°-30°	2161.1	15.1
30°-40°	2561.0	17.9
40°-50°	2591.3	18.2
50°-60°	2263.1	15.9
60°-70°	1653.8	11.6
70°-80°	880.0	6.2
80°-90°	203.4	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°	4121.5	28.9
0°-40°	6682.5	46.8
0°-60°	11536.9	80.8
0°-90°	14274.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14274.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5429	5429	5429	5429	5429	
5°	5359	5369	5409	5421	5376	508
15°	5077	5111	5159	5190	5123	1431
25°	4597	4654	4731	4748	4676	2118
35°	3980	4042	4137	4166	4099	2489
45°	3252	3310	3416	3419	3352	2509
55°	2466	2516	2581	2544	2502	2204
65°	1639	1673	1702	1668	1640	1622
75°	813	832	850	819	801	865
85°	155	158	165	167	161	196
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5429.4	5429.4	5429.4	5429.4	5429.4
2.5°	5386.9	5404.5	5422.6	5430.5	5386.4
5°	5358.7	5368.8	5409.0	5421.4	5375.6
7.5°	5312.3	5327.5	5366.6	5372.2	5328.1
10°	5248.9	5276.1	5302.1	5330.4	5276.6
12.5°	5168.0	5204.8	5248.9	5254.0	5213.3
15°	5076.9	5110.9	5159.0	5190.1	5122.8
17.5°	4975.1	5007.9	5070.2	5075.8	5035.1
20°	4861.4	4902.1	4976.8	4989.8	4916.9
22.5°	4732.4	4787.3	4849.5	4862.0	4808.2
25°	4597.3	4653.8	4730.7	4748.3	4676.4
27.5°	4455.8	4510.1	4596.7	4609.1	4548.6
30°	4304.2	4355.1	4450.2	4471.1	4409.4
32.5°	4150.4	4201.3	4306.5	4324.0	4264.1
35°	3979.5	4041.8	4137.4	4166.2	4098.9
37.5°	3805.3	3865.8	3974.4	4000.5	3928.1
40°	3624.9	3684.8	3791.7	3813.2	3743.6
42.5°	3440.4	3500.4	3614.7	3618.1	3560.4
45°	3252.1	3309.8	3416.1	3418.9	3351.6
47.5°	3060.9	3119.1	3214.2	3203.4	3140.1
50°	2867.4	2922.8	3006.0	2984.5	2927.4
52.5°	2667.2	2720.9	2799.5	2764.5	2710.7
55°	2465.8	2515.6	2581.2	2543.8	2502.0
57.5°	2262.7	2313.0	2363.4	2325.5	2289.3
60°	2057.9	2102.1	2143.3	2104.9	2077.2
62.5°	1849.8	1887.7	1923.3	1886.5	1860.5
65°	1639.3	1672.7	1702.1	1668.2	1640.5
67.5°	1430.0	1458.3	1485.5	1450.4	1421.5
70°	1220.7	1245.1	1269.9	1233.7	1207.2
72.5°	1014.3	1035.8	1057.8	1022.7	999.5
75°	813.4	832.1	850.2	819.1	801.0
77.5°	621.7	637.5	650.0	630.2	612.6
80°	443.5	455.4	462.7	454.8	438.4
82.5°	285.1	293.6	297.5	297.0	286.2
85°	155.0	157.8	165.2	166.9	161.2
87.5°	60.0	63.9	65.6	70.7	65.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)