

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: P489726

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-40-120-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: P489726  
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-40-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

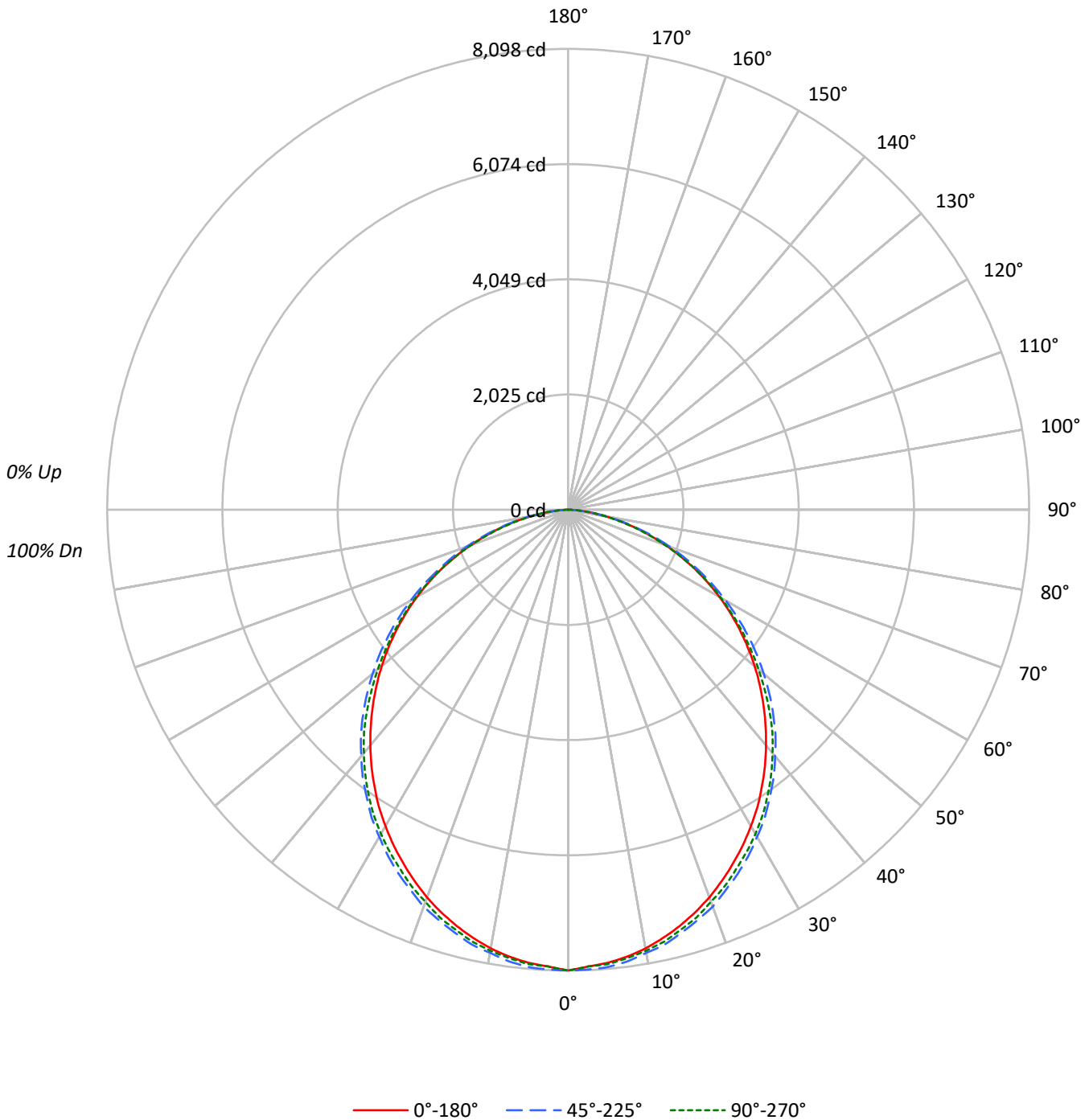
Lumens per Lamp: N/A  
Luminaire Lumens: 21289.3 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	10895	10895	10895
5°	10794	10896	10829
10°	10696	10804	10752
15°	10548	10718	10643
20°	10382	10628	10500
25°	10179	10475	10355
30°	9974	10312	10217
35°	9749	10136	10041
40°	9496	9933	9807
45°	9229	9695	9512
50°	8952	9384	9139
55°	8627	9031	8754
60°	8259	8602	8337
65°	7784	8082	7790
70°	7163	7451	7083
75°	6307	6592	6211
80°	5125	5347	5067
85°	3569	3804	3713



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	762.6	3.6
10°-20°	2161.2	10.2
20°-30°	3223.3	15.1
30°-40°	3819.6	17.9
40°-50°	3864.9	18.2
50°-60°	3375.4	15.9
60°-70°	2466.6	11.6
70°-80°	1312.4	6.2
80°-90°	303.3	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°	6147.1	28.9
0°-40°	9966.7	46.8
0°-60°	17206.9	80.8
0°-90°	21289.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	21289.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8098	8098	8098	8098	8098	
5°	7992	8007	8067	8086	8018	758
15°	7572	7623	7694	7741	7640	2135
25°	6857	6941	7056	7082	6975	3159
35°	5935	6028	6171	6214	6113	3712
45°	4850	4936	5095	5099	4999	3742
55°	3678	3752	3850	3794	3732	3287
65°	2445	2495	2539	2488	2447	2419
75°	1213	1241	1268	1222	1195	1290
85°	231	235	246	249	240	293
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8097.7	8097.7	8097.7	8097.7	8097.7
2.5°	8034.4	8060.6	8087.6	8099.4	8033.6
5°	7992.2	8007.4	8067.3	8085.9	8017.5
7.5°	7923.0	7945.8	8004.0	8012.5	7946.7
10°	7828.6	7869.1	7907.9	7950.0	7869.9
12.5°	7707.9	7762.7	7828.6	7836.1	7775.4
15°	7572.1	7622.7	7694.4	7740.8	7640.4
17.5°	7420.2	7469.1	7562.0	7570.4	7509.6
20°	7250.6	7311.4	7422.7	7442.1	7333.3
22.5°	7058.3	7140.1	7232.9	7251.5	7171.3
25°	6856.6	6941.0	7055.7	7081.9	6974.7
27.5°	6645.7	6726.7	6855.8	6874.3	6784.1
30°	6419.6	6495.5	6637.3	6668.5	6576.5
32.5°	6190.1	6266.1	6423.0	6449.1	6359.7
35°	5935.3	6028.1	6170.7	6213.7	6113.3
37.5°	5675.5	5765.7	5927.7	5966.5	5858.6
40°	5406.3	5495.8	5655.2	5687.3	5583.5
42.5°	5131.3	5220.7	5391.1	5396.2	5310.2
45°	4850.3	4936.4	5095.0	5099.2	4998.8
47.5°	4565.2	4652.1	4793.8	4777.8	4683.3
50°	4276.6	4359.3	4483.3	4451.3	4366.1
52.5°	3978.0	4058.1	4175.4	4123.1	4042.9
55°	3677.6	3751.9	3849.7	3794.1	3731.6
57.5°	3374.7	3449.8	3524.9	3468.4	3414.4
60°	3069.3	3135.1	3196.7	3139.4	3098.0
62.5°	2758.9	2815.4	2868.5	2813.7	2774.9
65°	2445.0	2494.8	2538.6	2488.0	2446.7
67.5°	2132.8	2175.0	2215.5	2163.2	2120.2
70°	1820.7	1857.0	1894.1	1840.1	1800.4
72.5°	1512.7	1544.8	1577.7	1525.4	1490.8
75°	1213.2	1241.1	1268.1	1221.7	1194.7
77.5°	927.2	950.8	969.4	939.9	913.7
80°	661.4	679.2	690.1	678.3	653.9
82.5°	425.2	437.9	443.8	442.9	426.9
85°	231.2	235.4	246.4	248.9	240.5
87.5°	89.4	95.3	97.9	105.5	97.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)