

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: P489746

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-30-120-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: P489746  
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-LD4-5STD-30-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

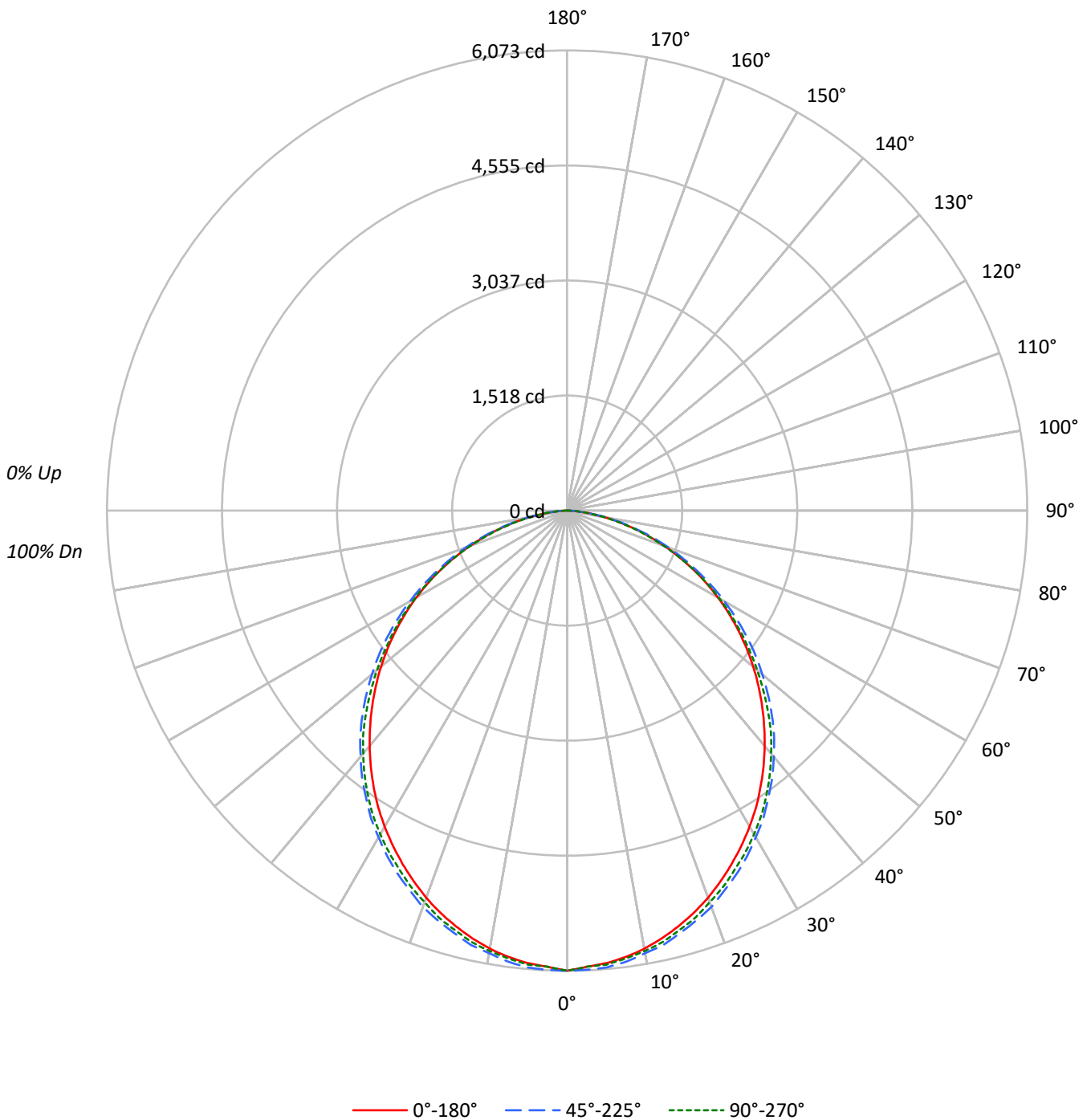
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15967.4 lumens  
Efficiency: N/A  
Efficacy: 95.9 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): 166.5  
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°	8172	8172	8172
5°	8096	8172	8122
10°	8022	8103	8064
15°	7911	8039	7982
20°	7786	7971	7875
25°	7635	7856	7766
30°	7480	7734	7663
35°	7312	7602	7531
40°	7122	7450	7355
45°	6922	7271	7134
50°	6714	7039	6854
55°	6470	6773	6565
60°	6195	6452	6253
65°	5838	6062	5842
70°	5372	5589	5312
75°	4730	4944	4658
80°	3844	4011	3800
85°	2677	2853	2783



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	572.0	3.6
10°-20°	1620.9	10.2
20°-30°	2417.5	15.1
30°-40°	2864.8	17.9
40°-50°	2898.7	18.2
50°-60°	2531.6	15.9
60°-70°	1850.0	11.6
70°-80°	984.3	6.2
80°-90°	227.5	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°	4610.4	28.9
0°-40°	7475.2	46.8
0°-60°	12905.6	80.8
0°-90°	15967.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15967.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6073	6073	6073	6073	6073	
5°	5994	6006	6051	6065	6013	568
15°	5679	5717	5771	5806	5730	1601
25°	5143	5206	5292	5312	5231	2369
35°	4452	4521	4628	4660	4585	2784
45°	3638	3702	3821	3824	3749	2806
55°	2758	2814	2887	2846	2799	2466
65°	1834	1871	1904	1866	1835	1815
75°	910	931	951	916	896	967
85°	173	176	185	187	180	220
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6073.4	6073.4	6073.4	6073.4	6073.4
2.5°	6026.0	6045.6	6065.8	6074.7	6025.3
5°	5994.3	6005.7	6050.7	6064.6	6013.3
7.5°	5942.4	5959.5	6003.2	6009.5	5960.2
10°	5871.6	5901.9	5931.1	5962.7	5902.6
12.5°	5781.1	5822.2	5871.6	5877.3	5831.7
15°	5679.2	5717.2	5771.0	5805.8	5730.5
17.5°	5565.3	5602.0	5671.6	5677.9	5632.4
20°	5438.1	5483.7	5567.2	5581.8	5500.1
22.5°	5293.8	5355.2	5424.8	5438.8	5378.6
25°	5142.6	5205.9	5291.9	5311.6	5231.2
27.5°	4984.4	5045.2	5142.0	5155.9	5088.2
30°	4814.8	4871.8	4978.1	5001.5	4932.5
32.5°	4642.7	4699.7	4817.4	4837.0	4769.9
35°	4451.6	4521.2	4628.2	4660.4	4585.1
37.5°	4256.7	4324.4	4445.9	4475.0	4394.0
40°	4054.9	4121.9	4241.5	4265.6	4187.7
42.5°	3848.6	3915.6	4043.5	4047.3	3982.7
45°	3637.9	3702.4	3821.4	3824.5	3749.2
47.5°	3424.0	3489.2	3595.5	3583.4	3512.6
50°	3207.6	3269.6	3362.6	3338.6	3274.6
52.5°	2983.6	3043.7	3131.6	3092.4	3032.3
55°	2758.3	2814.0	2887.4	2845.6	2798.8
57.5°	2531.1	2587.4	2643.8	2601.4	2560.9
60°	2302.1	2351.4	2397.6	2354.6	2323.6
62.5°	2069.2	2111.6	2151.5	2110.3	2081.2
65°	1833.8	1871.1	1904.0	1866.1	1835.1
67.5°	1599.7	1631.3	1661.7	1622.5	1590.2
70°	1365.5	1392.8	1420.6	1380.1	1350.4
72.5°	1134.6	1158.6	1183.3	1144.1	1118.1
75°	909.9	930.8	951.1	916.3	896.0
77.5°	695.4	713.1	727.1	704.9	685.3
80°	496.1	509.4	517.6	508.8	490.4
82.5°	318.9	328.4	332.8	332.2	320.2
85°	173.4	176.5	184.8	186.7	180.3
87.5°	67.1	71.5	73.4	79.1	72.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)