

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: P489657

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-50-120-EDD**

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: P489657  
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-50-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

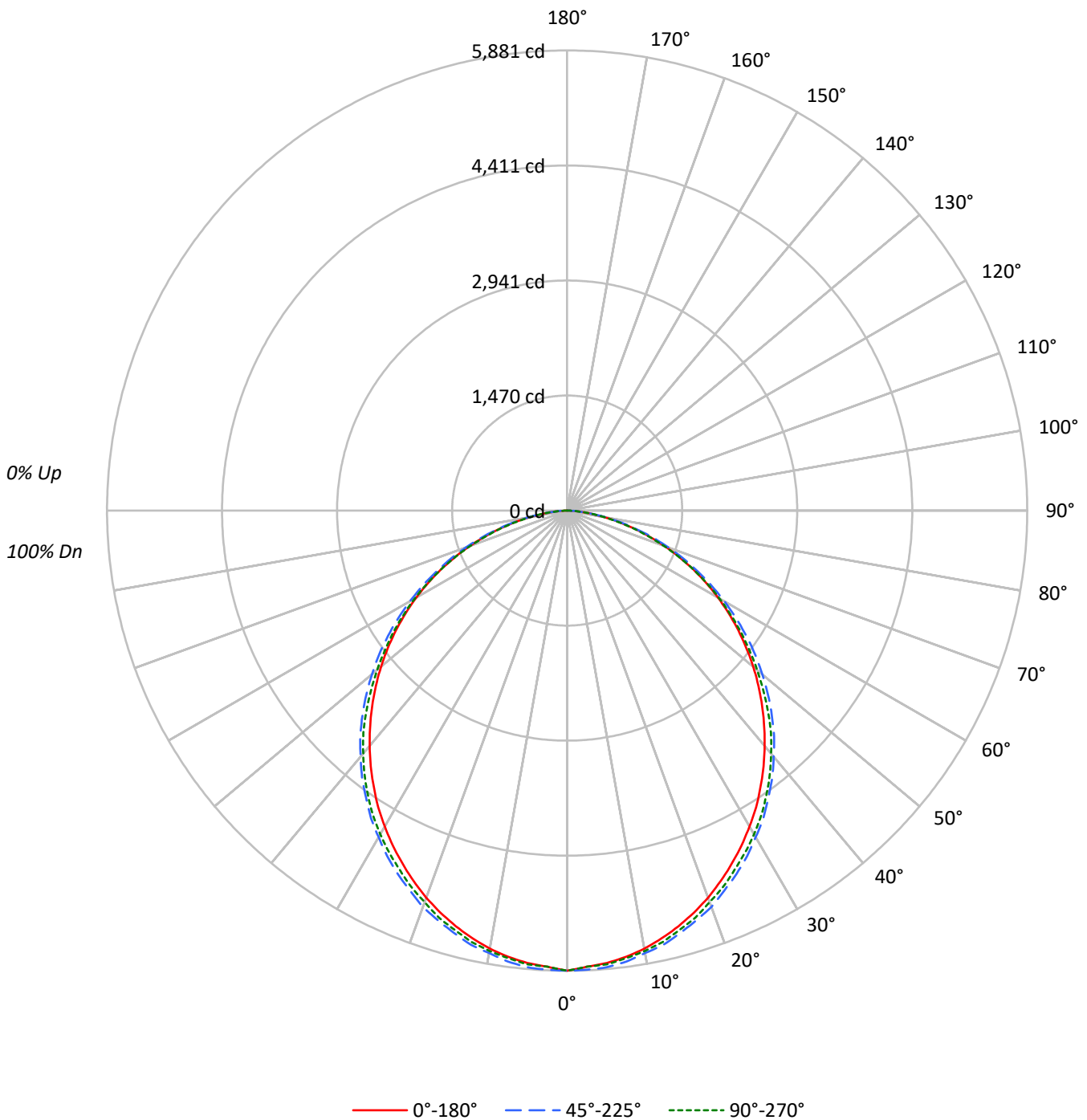
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15460.4 lumens  
Efficiency: N/A  
Efficacy: 119.3 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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CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3HI-50-120-EDD

### 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°	7912	7912	7912
5°	7839	7913	7864
10°	7767	7846	7808
15°	7660	7783	7729
20°	7539	7718	7625
25°	7392	7607	7520
30°	7243	7489	7420
35°	7080	7361	7292
40°	6896	7213	7122
45°	6702	7040	6908
50°	6501	6815	6637
55°	6265	6558	6357
60°	5998	6247	6054
65°	5653	5869	5657
70°	5201	5411	5144
75°	4580	4787	4510
80°	3722	3883	3679
85°	2592	2762	2695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	553.8	3.6
10°-20°	1569.4	10.2
20°-30°	2340.8	15.1
30°-40°	2773.8	17.9
40°-50°	2806.7	18.2
50°-60°	2451.2	15.9
60°-70°	1791.2	11.6
70°-80°	953.1	6.2
80°-90°	220.3	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°	4464.0	28.9
0°-40°	7237.9	46.8
0°-60°	12495.8	80.8
0°-90°	15460.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15460.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5881	5881	5881	5881	5881	
5°	5804	5815	5858	5872	5822	550
15°	5499	5536	5588	5621	5548	1550
25°	4979	5041	5124	5143	5065	2294
35°	4310	4378	4481	4512	4440	2696
45°	3522	3585	3700	3703	3630	2717
55°	2671	2725	2796	2755	2710	2387
65°	1776	1812	1844	1807	1777	1757
75°	881	901	921	887	868	937
85°	168	171	179	181	175	213
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5880.6	5880.6	5880.6	5880.6	5880.6
2.5°	5834.6	5853.6	5873.2	5881.8	5834.0
5°	5804.0	5815.0	5858.5	5872.0	5822.4
7.5°	5753.8	5770.3	5812.6	5818.7	5770.9
10°	5685.1	5714.5	5742.7	5773.4	5715.2
12.5°	5597.5	5637.3	5685.1	5690.7	5646.5
15°	5498.9	5535.6	5587.7	5621.4	5548.5
17.5°	5388.6	5424.1	5491.5	5497.7	5453.5
20°	5265.4	5309.6	5390.4	5404.5	5325.5
22.5°	5125.8	5185.2	5252.6	5266.1	5207.9
25°	4979.3	5040.6	5123.9	5142.9	5065.1
27.5°	4826.1	4885.0	4978.7	4992.2	4926.6
30°	4661.9	4717.1	4820.0	4842.7	4775.9
32.5°	4495.3	4550.4	4664.4	4683.4	4618.4
35°	4310.3	4377.7	4481.2	4512.5	4439.5
37.5°	4121.6	4187.1	4304.8	4332.9	4254.5
40°	3926.1	3991.1	4106.9	4130.1	4054.8
42.5°	3726.4	3791.3	3915.1	3918.8	3856.3
45°	3522.3	3584.8	3700.0	3703.1	3630.2
47.5°	3315.3	3378.4	3481.3	3469.7	3401.0
50°	3105.7	3165.8	3255.8	3232.5	3170.7
52.5°	2888.8	2947.0	3032.2	2994.2	2936.0
55°	2670.7	2724.6	2795.7	2755.3	2709.9
57.5°	2450.8	2505.3	2559.8	2518.8	2479.6
60°	2229.0	2276.8	2321.5	2279.8	2249.8
62.5°	2003.5	2044.5	2083.1	2043.3	2015.1
65°	1775.6	1811.7	1843.6	1806.8	1776.8
67.5°	1548.9	1579.5	1608.9	1570.9	1539.7
70°	1322.2	1348.5	1375.5	1336.3	1307.5
72.5°	1098.6	1121.8	1145.7	1107.7	1082.6
75°	881.0	901.3	920.9	887.2	867.6
77.5°	673.3	690.5	704.0	682.5	663.5
80°	480.3	493.2	501.2	492.6	474.8
82.5°	308.8	318.0	322.3	321.7	310.0
85°	167.9	170.9	178.9	180.7	174.6
87.5°	64.9	69.2	71.1	76.6	70.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)