

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: P489719

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-20-120-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: P489719  
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  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

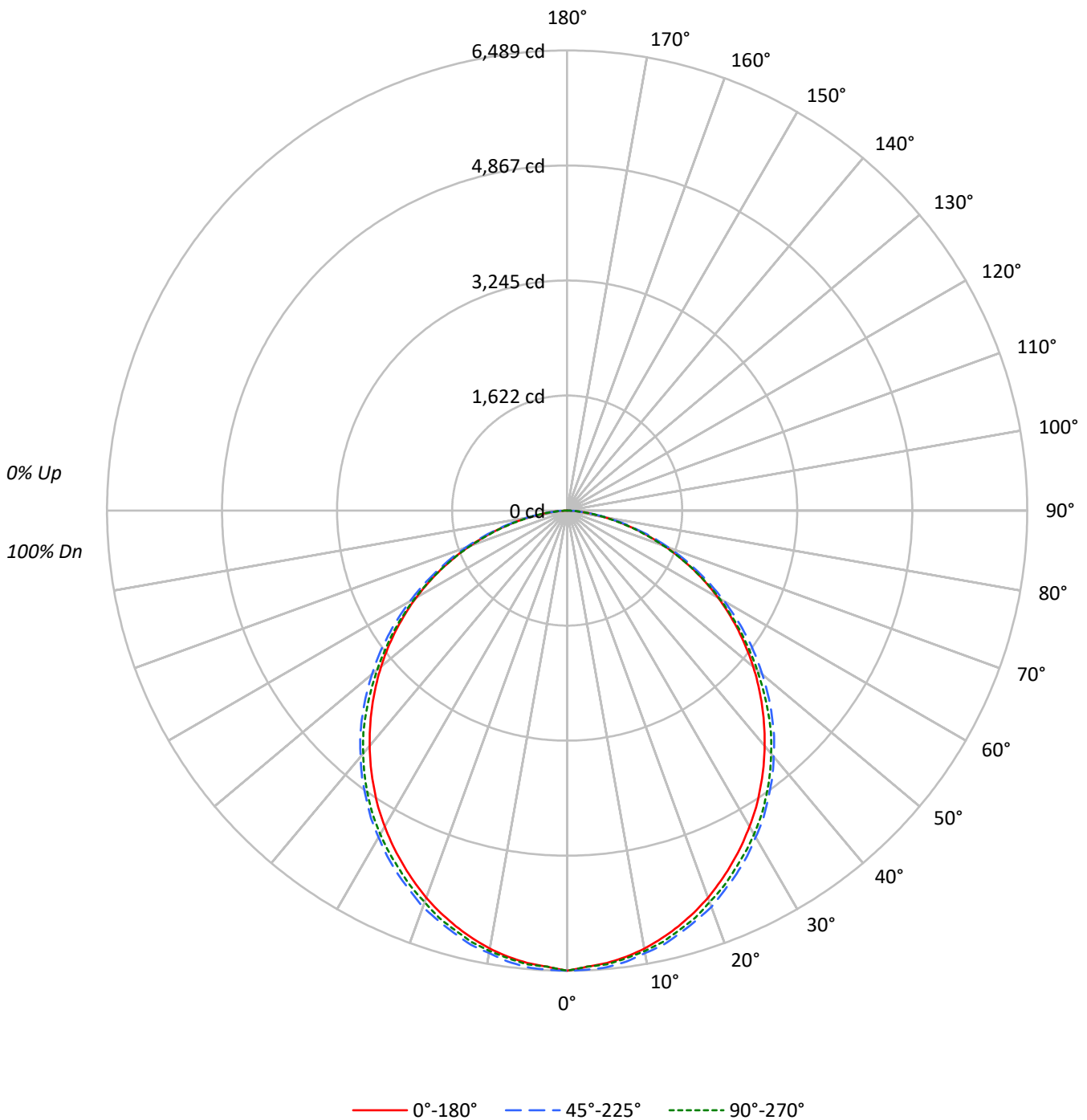
Lumens per Lamp: N/A  
Luminaire Lumens: 17058.9 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	8730	8730	8730
5°	8650	8731	8677
10°	8570	8657	8616
15°	8452	8588	8528
20°	8319	8516	8414
25°	8156	8393	8297
30°	7992	8263	8187
35°	7812	8122	8046
40°	7609	7959	7858
45°	7395	7768	7622
50°	7173	7520	7323
55°	6913	7236	7014
60°	6618	6893	6680
65°	6238	6476	6242
70°	5739	5971	5676
75°	5054	5282	4977
80°	4107	4285	4059
85°	2859	3047	2975



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	611.1	3.6
10°-20°	1731.7	10.2
20°-30°	2582.8	15.1
30°-40°	3060.6	17.9
40°-50°	3096.9	18.2
50°-60°	2704.7	15.9
60°-70°	1976.5	11.6
70°-80°	1051.6	6.2
80°-90°	243.1	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°	4925.6	28.9
0°-40°	7986.2	46.8
0°-60°	13787.8	80.8
0°-90°	17058.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17058.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6489	6489	6489	6489	6489	
5°	6404	6416	6464	6479	6424	607
15°	6067	6108	6166	6203	6122	1710
25°	5494	5562	5654	5675	5589	2531
35°	4756	4830	4944	4979	4899	2974
45°	3886	3956	4083	4086	4006	2998
55°	2947	3006	3085	3040	2990	2634
65°	1959	1999	2034	1994	1960	1939
75°	972	994	1016	979	957	1034
85°	185	189	197	199	193	235
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6488.6	6488.6	6488.6	6488.6	6488.6
2.5°	6437.9	6458.9	6480.5	6490.0	6437.2
5°	6404.1	6416.3	6464.3	6479.1	6424.4
7.5°	6348.7	6366.9	6413.6	6420.3	6367.6
10°	6272.9	6305.4	6336.5	6370.3	6306.1
12.5°	6176.3	6220.2	6272.9	6279.0	6230.4
15°	6067.4	6108.0	6165.5	6202.6	6122.2
17.5°	5945.7	5985.0	6059.3	6066.1	6017.4
20°	5809.9	5858.5	5947.8	5963.3	5876.1
22.5°	5655.7	5721.3	5795.7	5810.5	5746.3
25°	5494.1	5561.8	5653.7	5674.7	5588.8
27.5°	5325.1	5390.0	5493.5	5508.3	5436.0
30°	5144.0	5204.8	5318.4	5343.4	5269.7
32.5°	4960.1	5020.9	5146.7	5167.6	5096.0
35°	4755.9	4830.3	4944.5	4979.0	4898.6
37.5°	4547.7	4620.0	4749.8	4780.9	4694.4
40°	4332.0	4403.7	4531.5	4557.2	4474.0
42.5°	4111.7	4183.3	4319.9	4323.9	4255.0
45°	3886.5	3955.5	4082.6	4086.0	4005.5
47.5°	3658.0	3727.7	3841.2	3828.4	3752.7
50°	3426.8	3493.1	3592.5	3566.8	3498.5
52.5°	3187.5	3251.7	3345.7	3303.8	3239.6
55°	2946.8	3006.3	3084.8	3040.1	2990.1
57.5°	2704.1	2764.3	2824.5	2779.2	2735.9
60°	2459.4	2512.2	2561.5	2515.5	2482.4
62.5°	2210.6	2255.9	2298.5	2254.6	2223.5
65°	1959.2	1999.0	2034.2	1993.6	1960.5
67.5°	1709.0	1742.8	1775.3	1733.4	1698.9
70°	1458.9	1488.0	1517.7	1474.4	1442.7
72.5°	1212.1	1237.8	1264.2	1222.3	1194.6
75°	972.1	994.4	1016.1	978.9	957.3
77.5°	743.0	761.9	776.8	753.1	732.1
80°	530.0	544.2	553.0	543.5	523.9
82.5°	340.7	350.9	355.6	354.9	342.1
85°	185.2	188.6	197.4	199.4	192.7
87.5°	71.7	76.4	78.4	84.5	77.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)