

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: P489655

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-40-120-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: P489655
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-40-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

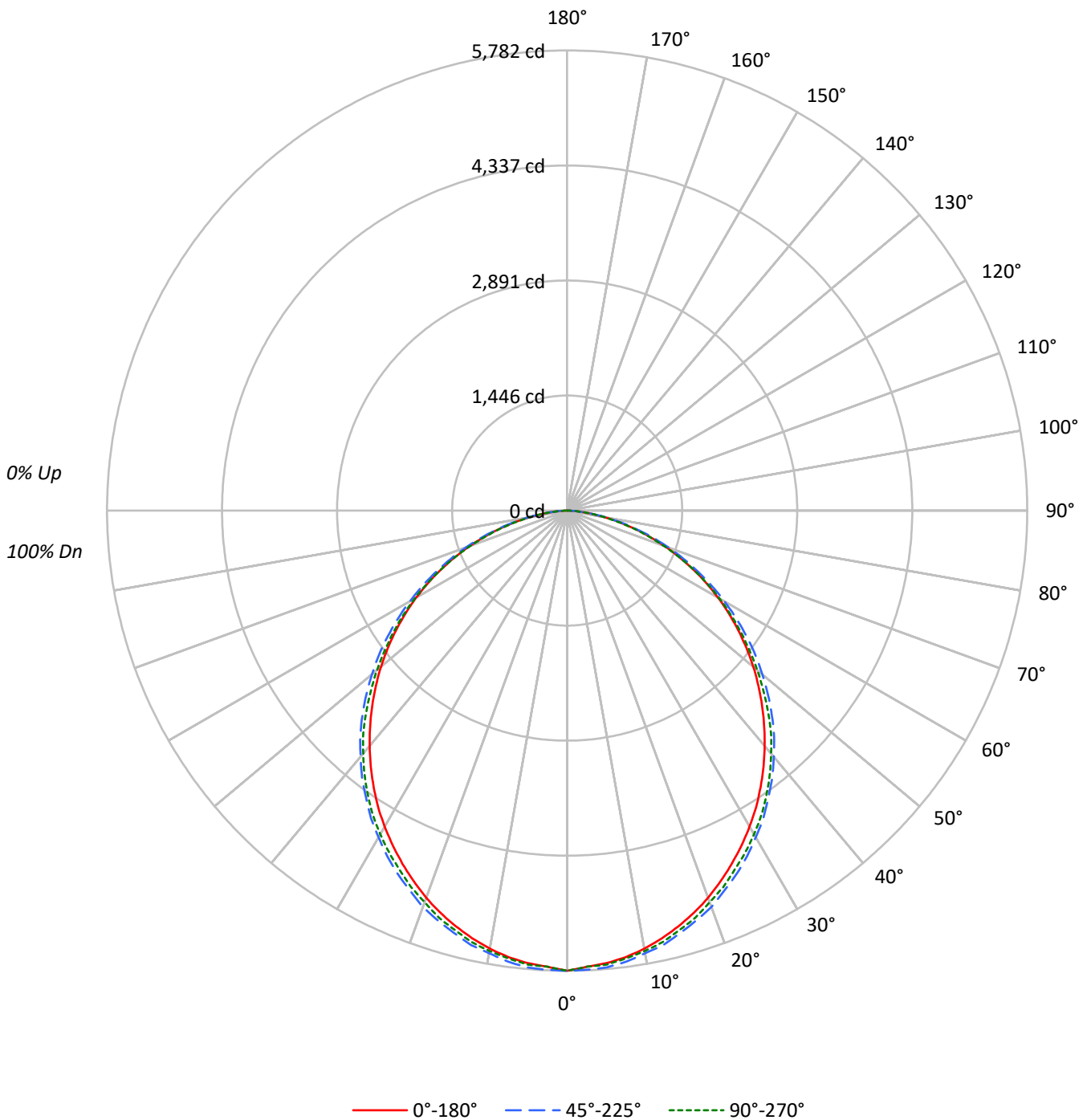
Lumens per Lamp: N/A
Luminaire Lumens: 15202.5 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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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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°	7780	7780	7780
5°	7708	7781	7733
10°	7638	7715	7678
15°	7532	7654	7600
20°	7413	7589	7498
25°	7269	7480	7394
30°	7122	7364	7296
35°	6962	7238	7171
40°	6781	7093	7003
45°	6591	6923	6792
50°	6392	6701	6526
55°	6161	6449	6251
60°	5898	6143	5953
65°	5559	5771	5563
70°	5115	5321	5058
75°	4504	4707	4435
80°	3660	3818	3618
85°	2549	2716	2651



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	544.6	3.6
10°-20°	1543.3	10.2
20°-30°	2301.7	15.1
30°-40°	2727.6	17.9
40°-50°	2759.9	18.2
50°-60°	2410.3	15.9
60°-70°	1761.4	11.6
70°-80°	937.2	6.2
80°-90°	216.6	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
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0°-30°	4389.6	28.9
0°-40°	7117.1	46.8
0°-60°	12287.3	80.8
0°-90°	15202.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15202.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5782	5782	5782	5782	5782	
5°	5707	5718	5761	5774	5725	541
15°	5407	5443	5494	5528	5456	1524
25°	4896	4956	5038	5057	4981	2256
35°	4238	4305	4406	4437	4366	2651
45°	3464	3525	3638	3641	3570	2672
55°	2626	2679	2749	2709	2665	2348
65°	1746	1782	1813	1777	1747	1728
75°	866	886	906	872	853	921
85°	165	168	176	178	172	209
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5782.5	5782.5	5782.5	5782.5	5782.5
2.5°	5737.3	5756.0	5775.3	5783.7	5736.7
5°	5707.2	5718.0	5760.8	5774.1	5725.3
7.5°	5657.8	5674.0	5715.6	5721.6	5674.6
10°	5590.3	5619.2	5646.9	5677.1	5619.8
12.5°	5504.1	5543.3	5590.3	5595.7	5552.3
15°	5407.2	5443.3	5494.5	5527.6	5456.0
17.5°	5298.7	5333.7	5399.9	5405.9	5362.6
20°	5177.6	5221.0	5300.5	5314.4	5236.7
22.5°	5040.2	5098.7	5165.0	5178.2	5121.0
25°	4896.3	4956.5	5038.4	5057.1	4980.6
27.5°	4745.6	4803.5	4895.7	4908.9	4844.4
30°	4584.2	4638.4	4739.6	4761.9	4696.2
32.5°	4420.3	4474.5	4586.6	4605.3	4541.4
35°	4238.4	4304.6	4406.5	4437.2	4365.5
37.5°	4052.8	4117.3	4232.9	4260.7	4183.5
40°	3860.6	3924.5	4038.3	4061.2	3987.1
42.5°	3664.2	3728.1	3849.8	3853.4	3791.9
45°	3463.6	3525.0	3638.3	3641.3	3569.6
47.5°	3260.0	3322.0	3423.2	3411.8	3344.3
50°	3053.9	3113.0	3201.5	3178.6	3117.8
52.5°	2840.6	2897.9	2981.6	2944.3	2887.0
55°	2626.2	2679.2	2749.1	2709.3	2664.7
57.5°	2409.9	2463.5	2517.1	2476.7	2438.2
60°	2191.8	2238.8	2282.8	2241.8	2212.3
62.5°	1970.1	2010.4	2048.4	2009.2	1981.5
65°	1746.0	1781.5	1812.8	1776.7	1747.2
67.5°	1523.0	1553.2	1582.1	1544.7	1514.0
70°	1300.1	1326.0	1352.5	1314.0	1285.7
72.5°	1080.2	1103.1	1126.6	1089.3	1064.6
75°	866.3	886.2	905.5	872.4	853.1
77.5°	662.1	679.0	692.2	671.1	652.5
80°	472.3	485.0	492.8	484.4	466.9
82.5°	303.6	312.7	316.9	316.3	304.8
85°	165.1	168.1	175.9	177.7	171.7
87.5°	63.9	68.1	69.9	75.3	69.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)