

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: P489735

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-30-120-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: P489735
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-LD4-5LO-30-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

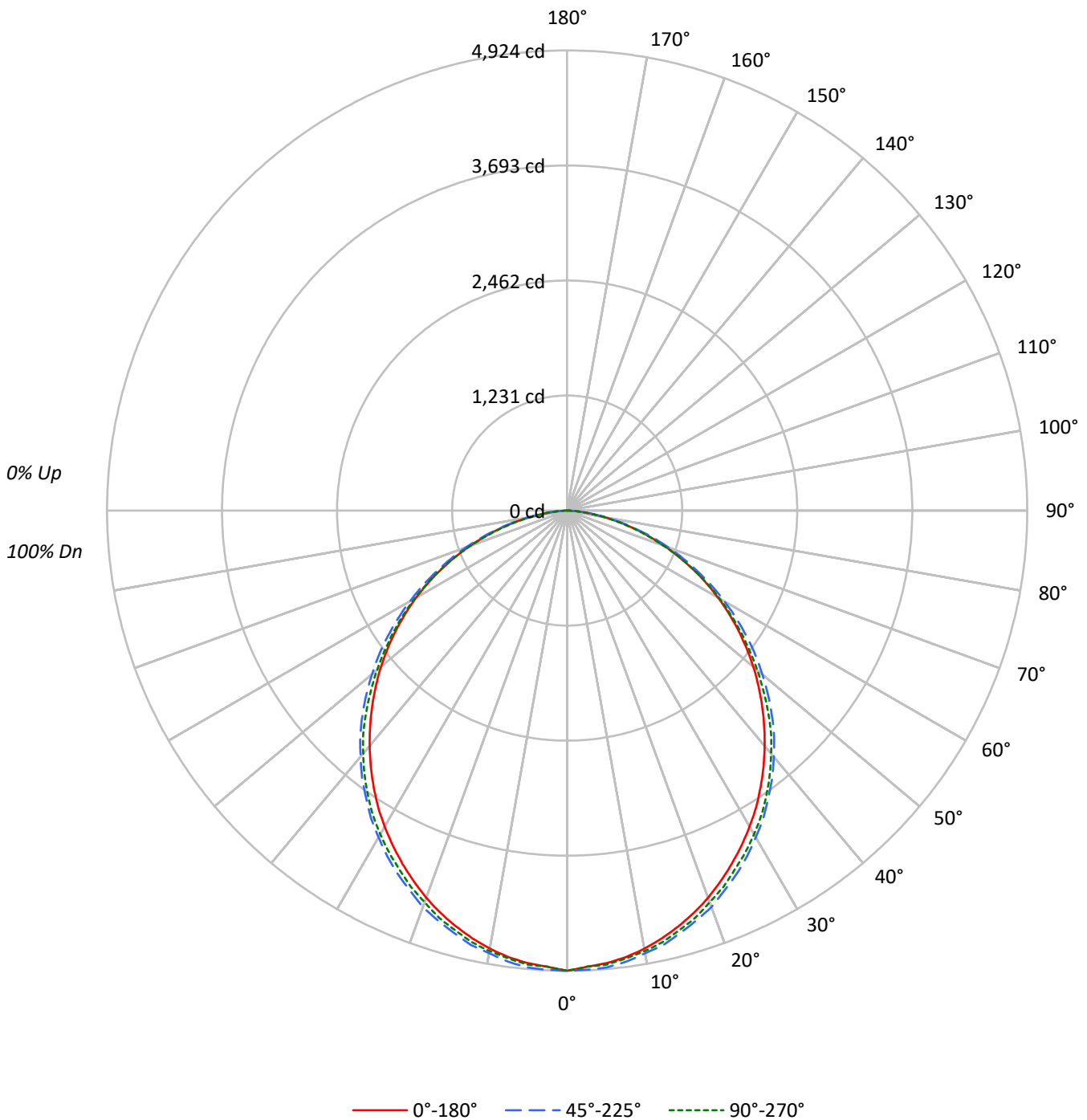
Lumens per Lamp: N/A
Luminaire Lumens: 12946.7 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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

TEST NUMBER: P489735

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5LO-30-120-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°	6626	6626	6626
5°	6564	6626	6585
10°	6504	6570	6539
15°	6414	6518	6472
20°	6313	6463	6385
25°	6190	6370	6297
30°	6065	6271	6214
35°	5929	6164	6106
40°	5775	6040	5964
45°	5613	5896	5785
50°	5444	5707	5558
55°	5246	5492	5323
60°	5023	5231	5070
65°	4734	4915	4737
70°	4356	4531	4307
75°	3836	4009	3777
80°	3116	3252	3081
85°	2171	2313	2257



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.8	3.6
10°-20°	1314.3	10.2
20°-30°	1960.2	15.1
30°-40°	2322.8	17.9
40°-50°	2350.4	18.2
50°-60°	2052.7	15.9
60°-70°	1500.0	11.6
70°-80°	798.1	6.2
80°-90°	184.5	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°	3738.2	28.9
0°-40°	6061.1	46.8
0°-60°	10464.1	80.8
0°-90°	12946.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12946.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4924	4924	4924	4924	4924	
5°	4860	4870	4906	4917	4876	461
15°	4605	4636	4679	4707	4646	1298
25°	4170	4221	4291	4307	4242	1921
35°	3610	3666	3753	3779	3718	2257
45°	2950	3002	3098	3101	3040	2276
55°	2236	2282	2341	2307	2269	1999
65°	1487	1517	1544	1513	1488	1471
75°	738	755	771	743	726	784
85°	141	143	150	151	146	178
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4924.5	4924.5	4924.5	4924.5	4924.5
2.5°	4886.0	4901.9	4918.3	4925.5	4885.5
5°	4860.3	4869.6	4906.0	4917.3	4875.7
7.5°	4818.3	4832.1	4867.5	4872.6	4832.6
10°	4760.8	4785.4	4809.0	4834.7	4785.9
12.5°	4687.4	4720.8	4760.8	4765.4	4728.5
15°	4604.8	4635.6	4679.2	4707.4	4646.4
17.5°	4512.5	4542.2	4598.7	4603.8	4566.9
20°	4409.3	4446.3	4514.0	4525.8	4459.6
22.5°	4292.4	4342.1	4398.6	4409.9	4361.1
25°	4169.7	4221.0	4290.8	4306.7	4241.6
27.5°	4041.5	4090.7	4169.2	4180.5	4125.6
30°	3904.0	3950.1	4036.3	4055.3	3999.4
32.5°	3764.4	3810.6	3906.0	3921.9	3867.5
35°	3609.5	3665.9	3752.6	3778.8	3717.7
37.5°	3451.4	3506.3	3604.8	3628.4	3562.8
40°	3287.8	3342.2	3439.1	3458.6	3395.5
42.5°	3120.5	3174.9	3278.5	3281.6	3229.3
45°	2949.7	3002.0	3098.4	3101.0	3040.0
47.5°	2776.2	2829.1	2915.3	2905.5	2848.1
50°	2600.8	2651.0	2726.5	2707.0	2655.1
52.5°	2419.1	2467.9	2539.2	2507.4	2458.6
55°	2236.5	2281.6	2341.1	2307.3	2269.3
57.5°	2052.3	2098.0	2143.6	2109.2	2076.4
60°	1866.6	1906.6	1944.0	1909.1	1884.0
62.5°	1677.7	1712.1	1744.4	1711.1	1687.5
65°	1486.9	1517.2	1543.8	1513.0	1487.9
67.5°	1297.0	1322.7	1347.3	1315.5	1289.3
70°	1107.2	1129.3	1151.8	1119.0	1094.9
72.5°	919.9	939.4	959.4	927.6	906.6
75°	737.8	754.7	771.1	742.9	726.5
77.5°	563.9	578.2	589.5	571.6	555.7
80°	402.2	413.0	419.7	412.5	397.6
82.5°	258.6	266.3	269.9	269.4	259.6
85°	140.6	143.1	149.8	151.4	146.2
87.5°	54.4	58.0	59.5	64.1	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)