

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: P489682

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-20-120-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: P489682
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-LD4-4HI-20-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

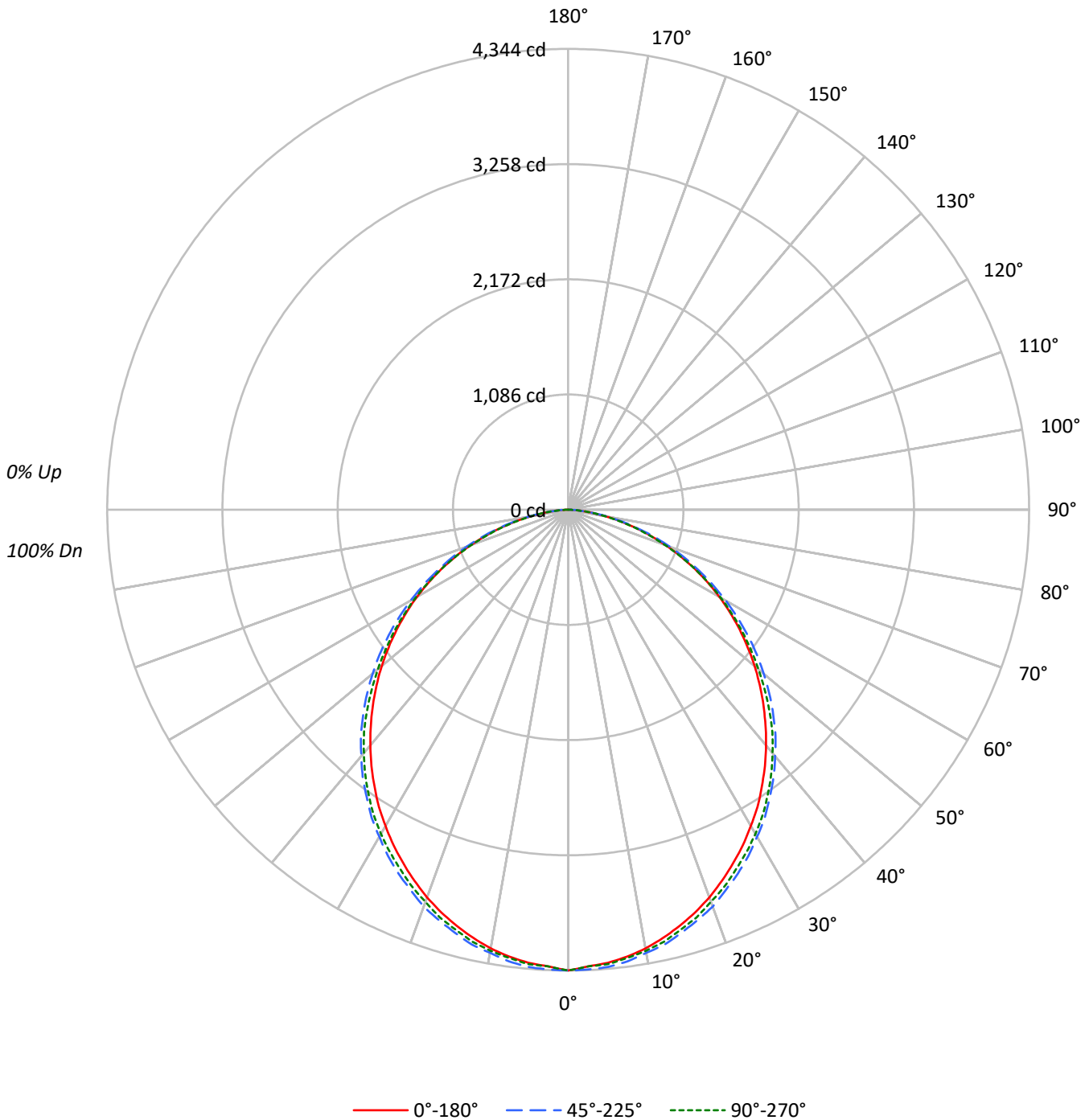
Lumens per Lamp: N/A
Luminaire Lumens: 11419.2 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	5844	5844	5844
5°	5790	5844	5808
10°	5737	5795	5767
15°	5657	5749	5709
20°	5569	5701	5632
25°	5460	5619	5554
30°	5350	5531	5480
35°	5229	5437	5386
40°	5093	5328	5260
45°	4950	5200	5102
50°	4802	5034	4902
55°	4627	4844	4695
60°	4430	4614	4472
65°	4175	4335	4178
70°	3842	3996	3799
75°	3383	3536	3331
80°	2749	2868	2717
85°	1914	2039	1991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	409.1	3.6
10°-20°	1159.2	10.2
20°-30°	1728.9	15.1
30°-40°	2048.8	17.9
40°-50°	2073.0	18.2
50°-60°	1810.5	15.9
60°-70°	1323.0	11.6
70°-80°	704.0	6.2
80°-90°	162.7	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°	3297.2	28.9
0°-40°	5346.0	46.8
0°-60°	9229.5	80.8
0°-90°	11419.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11419.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4344	4344	4344	4344	4344	
5°	4287	4295	4327	4337	4300	406
15°	4062	4089	4127	4152	4098	1145
25°	3678	3723	3785	3799	3741	1694
35°	3184	3233	3310	3333	3279	1991
45°	2602	2648	2733	2735	2681	2007
55°	1973	2012	2065	2035	2002	1763
65°	1312	1338	1362	1334	1312	1298
75°	651	666	680	655	641	692
85°	124	126	132	134	129	157
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4343.5	4343.5	4343.5	4343.5	4343.5
2.5°	4309.5	4323.5	4338.0	4344.4	4309.1
5°	4286.9	4295.0	4327.2	4337.1	4300.5
7.5°	4249.8	4262.0	4293.2	4297.8	4262.5
10°	4199.1	4220.8	4241.6	4264.3	4221.3
12.5°	4134.4	4163.8	4199.1	4203.2	4170.6
15°	4061.5	4088.7	4127.1	4152.0	4098.2
17.5°	3980.1	4006.3	4056.1	4060.6	4028.0
20°	3889.1	3921.7	3981.4	3991.8	3933.5
22.5°	3785.9	3829.8	3879.6	3889.6	3846.6
25°	3677.8	3723.0	3784.6	3798.6	3741.1
27.5°	3564.6	3608.1	3677.3	3687.3	3638.9
30°	3443.4	3484.1	3560.1	3576.9	3527.5
32.5°	3320.3	3361.0	3445.2	3459.2	3411.2
35°	3183.6	3233.4	3309.9	3332.9	3279.1
37.5°	3044.2	3092.6	3179.5	3200.3	3142.4
40°	2899.9	2947.8	3033.4	3050.6	2994.9
42.5°	2752.3	2800.3	2891.7	2894.4	2848.3
45°	2601.6	2647.8	2732.9	2735.1	2681.3
47.5°	2448.7	2495.3	2571.3	2562.7	2512.0
50°	2293.9	2338.3	2404.8	2387.6	2341.9
52.5°	2133.7	2176.7	2239.6	2211.6	2168.6
55°	1972.6	2012.4	2064.9	2035.1	2001.6
57.5°	1810.2	1850.4	1890.7	1860.4	1831.4
60°	1646.3	1681.6	1714.7	1683.9	1661.7
62.5°	1479.8	1510.1	1538.6	1509.2	1488.4
65°	1311.5	1338.2	1361.7	1334.5	1312.4
67.5°	1144.0	1166.6	1188.4	1160.3	1137.2
70°	976.6	996.0	1015.9	987.0	965.7
72.5°	811.4	828.6	846.2	818.2	799.6
75°	650.7	665.7	680.2	655.3	640.8
77.5°	497.3	510.0	520.0	504.1	490.1
80°	354.8	364.3	370.2	363.8	350.7
82.5°	228.1	234.9	238.0	237.6	229.0
85°	124.0	126.3	132.1	133.5	129.0
87.5°	48.0	51.1	52.5	56.6	52.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)