

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: P489697

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4LO-27-120-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: P489697
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-LD4-4LO-27-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

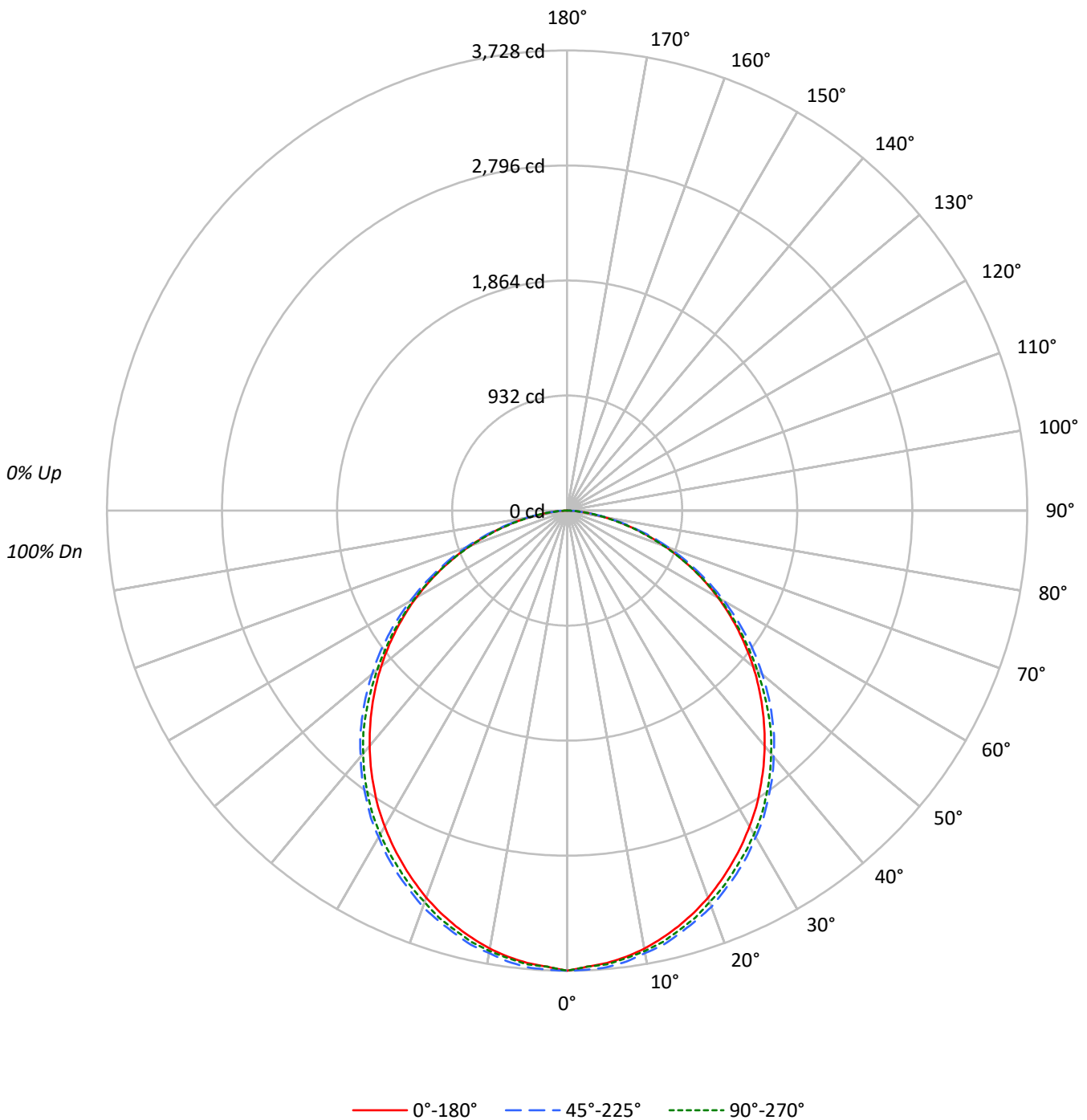
Lumens per Lamp: N/A
Luminaire Lumens: 9800.2 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5015	5015	5015
5°	4969	5016	4985
10°	4924	4974	4950
15°	4855	4934	4899
20°	4779	4892	4834
25°	4686	4822	4767
30°	4591	4747	4703
35°	4488	4666	4622
40°	4371	4572	4515
45°	4249	4463	4379
50°	4121	4320	4207
55°	3971	4157	4030
60°	3802	3960	3838
65°	3583	3720	3586
70°	3297	3430	3260
75°	2903	3034	2859
80°	2359	2462	2332
85°	1643	1751	1709



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.1	3.6
10°-20°	994.9	10.2
20°-30°	1483.8	15.1
30°-40°	1758.3	17.9
40°-50°	1779.1	18.2
50°-60°	1553.8	15.9
60°-70°	1135.5	11.6
70°-80°	604.2	6.2
80°-90°	139.6	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°	2829.7	28.9
0°-40°	4588.0	46.8
0°-60°	7921.0	80.8
0°-90°	9800.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9800.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3728	3728	3728	3728	3728	
5°	3679	3686	3714	3722	3691	349
15°	3486	3509	3542	3563	3517	983
25°	3156	3195	3248	3260	3211	1454
35°	2732	2775	2841	2860	2814	1709
45°	2233	2272	2345	2347	2301	1723
55°	1693	1727	1772	1746	1718	1513
65°	1126	1148	1169	1145	1126	1114
75°	558	571	584	562	550	594
85°	106	108	113	115	111	135
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3727.6	3727.6	3727.6	3727.6	3727.6
2.5°	3698.5	3710.6	3723.0	3728.4	3698.1
5°	3679.1	3686.1	3713.7	3722.2	3690.8
7.5°	3647.3	3657.7	3684.5	3688.4	3658.1
10°	3603.8	3622.4	3640.3	3659.7	3622.8
12.5°	3548.2	3573.5	3603.8	3607.3	3579.3
15°	3485.7	3509.0	3542.0	3563.4	3517.1
17.5°	3415.8	3438.3	3481.0	3484.9	3456.9
20°	3337.7	3365.7	3416.9	3425.9	3375.8
22.5°	3249.2	3286.8	3329.6	3338.1	3301.2
25°	3156.3	3195.2	3248.0	3260.0	3210.7
27.5°	3059.2	3096.5	3156.0	3164.5	3122.9
30°	2955.2	2990.1	3055.4	3069.7	3027.4
32.5°	2849.5	2884.5	2956.7	2968.8	2927.6
35°	2732.2	2775.0	2840.6	2860.4	2814.2
37.5°	2612.6	2654.2	2728.7	2746.6	2696.9
40°	2488.7	2529.9	2603.3	2618.1	2570.3
42.5°	2362.1	2403.3	2481.7	2484.1	2444.4
45°	2232.8	2272.4	2345.4	2347.4	2301.1
47.5°	2101.5	2141.5	2206.8	2199.4	2155.9
50°	1968.7	2006.7	2063.8	2049.1	2009.9
52.5°	1831.2	1868.1	1922.1	1898.0	1861.1
55°	1692.9	1727.1	1772.2	1746.5	1717.8
57.5°	1553.5	1588.1	1622.6	1596.6	1571.8
60°	1412.9	1443.2	1471.6	1445.2	1426.1
62.5°	1270.0	1296.0	1320.5	1295.2	1277.4
65°	1125.5	1148.4	1168.6	1145.3	1126.3
67.5°	981.8	1001.2	1019.9	995.8	976.0
70°	838.1	854.8	871.9	847.1	828.8
72.5°	696.4	711.1	726.3	702.2	686.3
75°	558.5	571.3	583.7	562.4	549.9
77.5°	426.8	437.7	446.2	432.7	420.6
80°	304.5	312.6	317.7	312.3	301.0
82.5°	195.7	201.6	204.3	203.9	196.5
85°	106.4	108.4	113.4	114.6	110.7
87.5°	41.2	43.9	45.1	48.5	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)