

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: P489702

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4LO-40-120-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: P489702
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-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

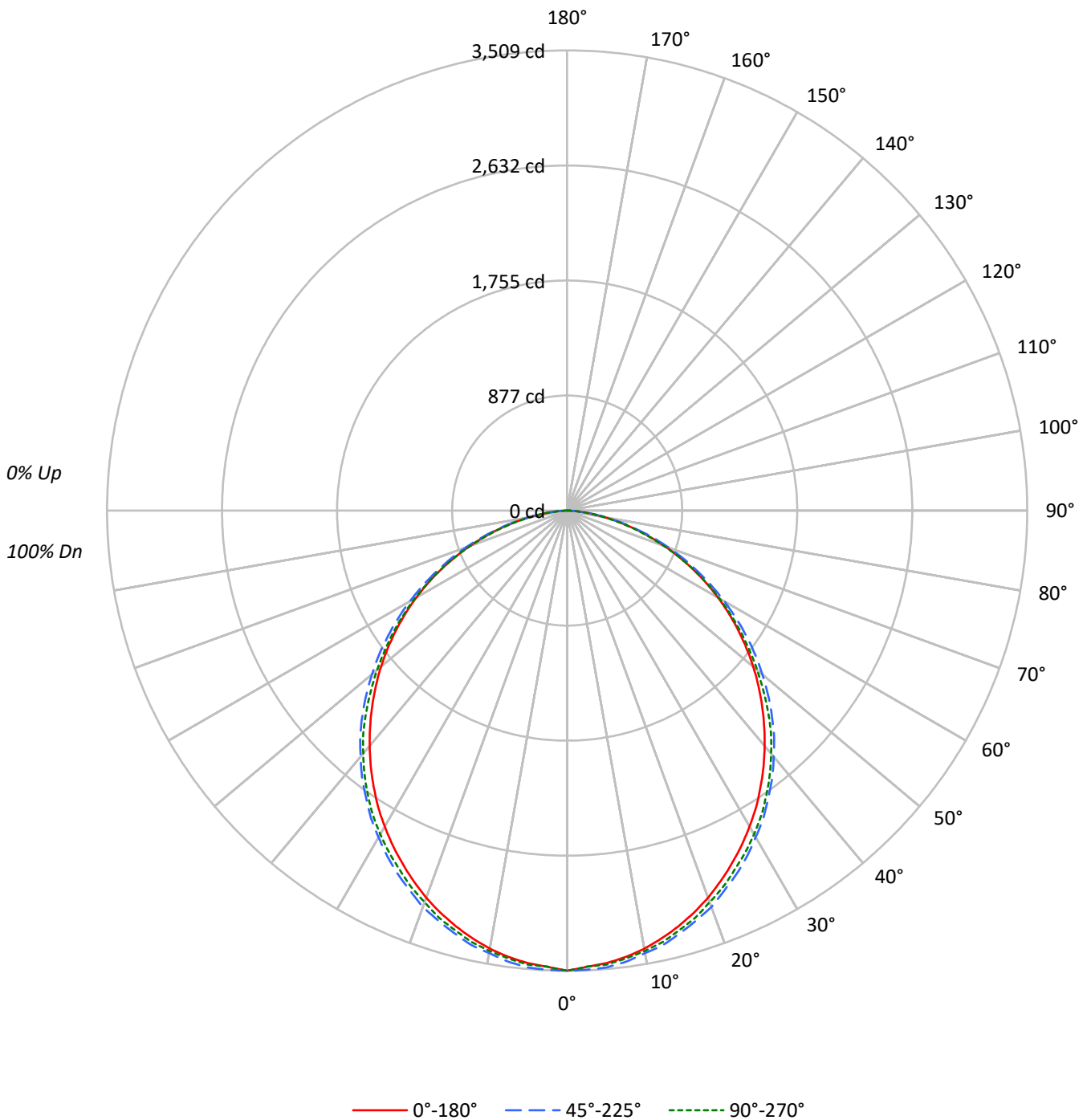
Lumens per Lamp: N/A
Luminaire Lumens: 9225.4 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4721	4721	4721
5°	4678	4722	4692
10°	4635	4682	4659
15°	4571	4645	4612
20°	4499	4606	4550
25°	4411	4539	4487
30°	4322	4469	4428
35°	4225	4392	4351
40°	4115	4304	4250
45°	3999	4201	4122
50°	3879	4067	3960
55°	3738	3913	3793
60°	3579	3728	3613
65°	3373	3502	3375
70°	3104	3229	3069
75°	2733	2857	2691
80°	2221	2318	2195
85°	1547	1649	1609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.5	3.6
10°-20°	936.5	10.2
20°-30°	1396.8	15.1
30°-40°	1655.2	17.9
40°-50°	1674.8	18.2
50°-60°	1462.7	15.9
60°-70°	1068.9	11.6
70°-80°	568.7	6.2
80°-90°	131.4	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°	2663.7	28.9
0°-40°	4318.9	46.8
0°-60°	7456.4	80.8
0°-90°	9225.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9225.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3509	3509	3509	3509	3509	
5°	3463	3470	3496	3504	3474	328
15°	3281	3303	3334	3354	3311	925
25°	2971	3008	3058	3069	3022	1369
35°	2572	2612	2674	2693	2649	1608
45°	2102	2139	2208	2210	2166	1621
55°	1594	1626	1668	1644	1617	1425
65°	1060	1081	1100	1078	1060	1048
75°	526	538	550	529	518	559
85°	100	102	107	108	104	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3509.0	3509.0	3509.0	3509.0	3509.0
2.5°	3481.6	3492.9	3504.6	3509.7	3481.2
5°	3463.3	3469.9	3495.9	3503.9	3474.3
7.5°	3433.3	3443.2	3468.4	3472.1	3443.6
10°	3392.4	3409.9	3426.8	3445.0	3410.3
12.5°	3340.1	3363.9	3392.4	3395.7	3369.4
15°	3281.2	3303.2	3334.3	3354.4	3310.9
17.5°	3215.4	3236.6	3276.9	3280.5	3254.2
20°	3142.0	3168.3	3216.5	3224.9	3177.8
22.5°	3058.6	3094.1	3134.3	3142.3	3107.6
25°	2971.2	3007.8	3057.5	3068.8	3022.4
27.5°	2879.8	2914.9	2970.9	2978.9	2939.8
30°	2781.8	2814.7	2876.2	2889.7	2849.8
32.5°	2682.4	2715.3	2783.3	2794.6	2755.9
35°	2572.0	2612.2	2674.0	2692.6	2649.1
37.5°	2459.4	2498.5	2568.7	2585.5	2538.7
40°	2342.8	2381.5	2450.6	2464.5	2419.5
42.5°	2223.6	2262.3	2336.2	2338.4	2301.1
45°	2101.8	2139.1	2207.8	2209.7	2166.2
47.5°	1978.3	2015.9	2077.3	2070.4	2029.4
50°	1853.2	1889.0	1942.8	1928.9	1892.0
52.5°	1723.8	1758.5	1809.3	1786.7	1751.9
55°	1593.6	1625.8	1668.2	1644.1	1617.0
57.5°	1462.4	1494.9	1527.5	1503.0	1479.6
60°	1330.0	1358.6	1385.3	1360.4	1342.5
62.5°	1195.5	1220.0	1243.0	1219.3	1202.5
65°	1059.5	1081.1	1100.1	1078.1	1060.2
67.5°	924.2	942.5	960.1	937.4	918.7
70°	789.0	804.7	820.8	797.4	780.2
72.5°	655.5	669.4	683.7	661.0	646.0
75°	525.7	537.8	549.5	529.4	517.7
77.5°	401.8	412.0	420.1	407.3	395.9
80°	286.6	294.3	299.1	293.9	283.3
82.5°	184.3	189.7	192.3	191.9	185.0
85°	100.2	102.0	106.8	107.9	104.2
87.5°	38.8	41.3	42.4	45.7	42.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)