

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: P489738

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489738
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-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

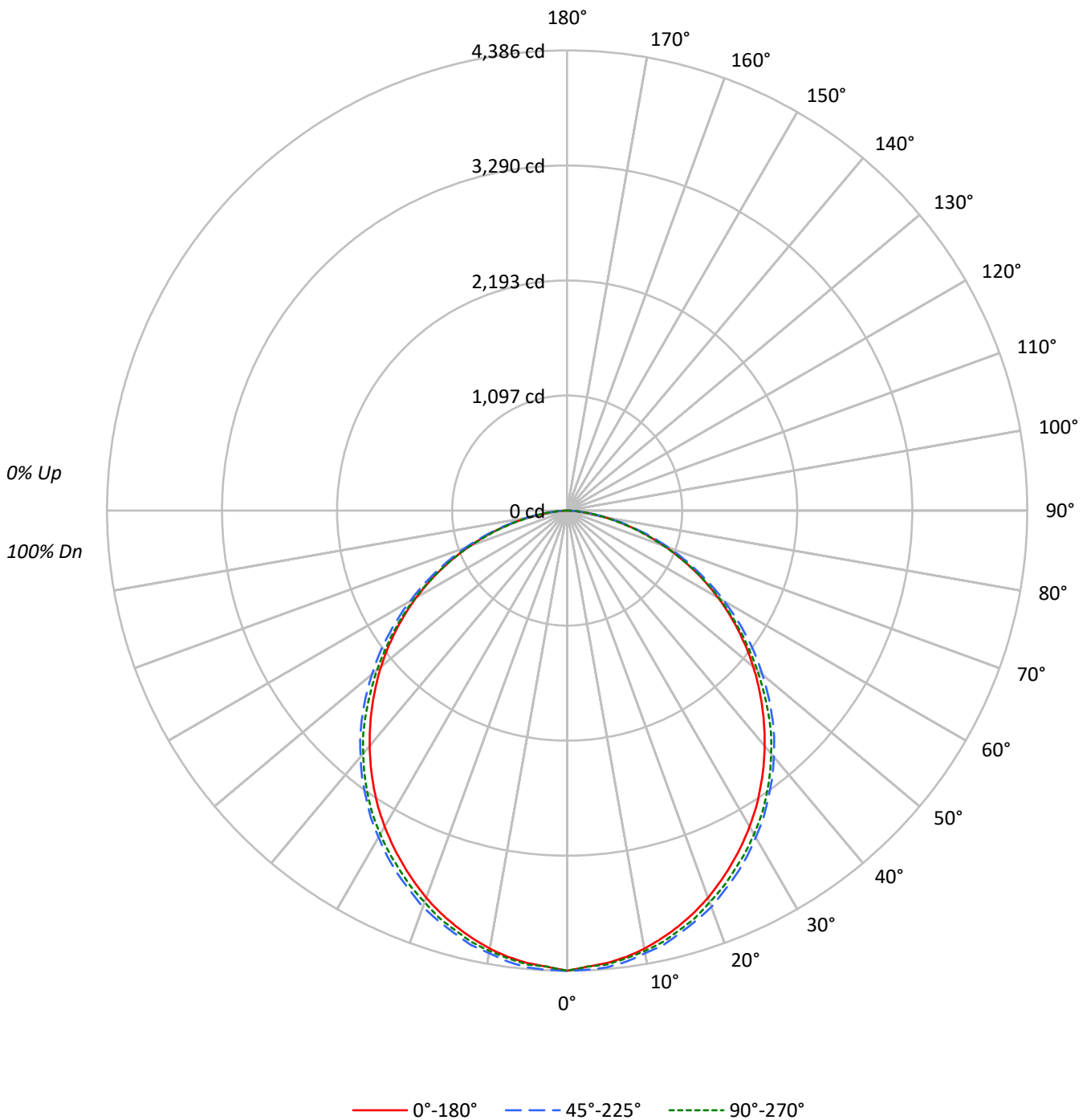
Lumens per Lamp: N/A
Luminaire Lumens: 11531.7 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	5902	5902	5902
5°	5847	5902	5866
10°	5794	5852	5824
15°	5713	5806	5765
20°	5623	5757	5688
25°	5514	5674	5609
30°	5402	5586	5535
35°	5281	5490	5439
40°	5143	5380	5312
45°	4999	5251	5152
50°	4849	5083	4950
55°	4673	4892	4742
60°	4474	4660	4516
65°	4216	4378	4219
70°	3880	4036	3836
75°	3417	3571	3364
80°	2776	2896	2744
85°	1933	2059	2010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.1	3.6
10°-20°	1170.6	10.2
20°-30°	1745.9	15.1
30°-40°	2069.0	17.9
40°-50°	2093.5	18.2
50°-60°	1828.3	15.9
60°-70°	1336.1	11.6
70°-80°	710.9	6.2
80°-90°	164.3	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°	3329.7	28.9
0°-40°	5398.6	46.8
0°-60°	9320.4	80.8
0°-90°	11531.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11531.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4386	4386	4386	4386	4386	
5°	4329	4337	4370	4380	4343	410
15°	4102	4129	4168	4193	4139	1156
25°	3714	3760	3822	3836	3778	1711
35°	3215	3265	3342	3366	3311	2011
45°	2627	2674	2760	2762	2708	2027
55°	1992	2032	2085	2055	2021	1781
65°	1324	1351	1375	1348	1325	1311
75°	657	672	687	662	647	699
85°	125	128	133	135	130	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4386.2	4386.2	4386.2	4386.2	4386.2
2.5°	4352.0	4366.1	4380.8	4387.2	4351.5
5°	4329.1	4337.3	4369.8	4379.9	4342.8
7.5°	4291.7	4304.0	4335.5	4340.1	4304.4
10°	4240.5	4262.4	4283.4	4306.3	4262.9
12.5°	4175.1	4204.8	4240.5	4244.6	4211.7
15°	4101.5	4129.0	4167.8	4192.9	4138.6
17.5°	4019.3	4045.8	4096.1	4100.6	4067.7
20°	3927.4	3960.3	4020.7	4031.2	3972.2
22.5°	3823.2	3867.6	3917.8	3927.9	3884.5
25°	3714.0	3759.7	3821.9	3836.0	3778.0
27.5°	3599.8	3643.6	3713.6	3723.6	3674.7
30°	3477.3	3518.4	3595.2	3612.1	3562.3
32.5°	3353.0	3394.1	3479.1	3493.3	3444.8
35°	3215.0	3265.2	3342.5	3365.8	3311.4
37.5°	3074.2	3123.1	3210.9	3231.9	3173.4
40°	2928.4	2976.9	3063.2	3080.6	3024.4
42.5°	2779.5	2827.9	2920.2	2922.9	2876.3
45°	2627.3	2673.9	2759.8	2762.1	2707.7
47.5°	2472.8	2519.9	2596.7	2588.0	2536.8
50°	2316.5	2361.3	2428.5	2411.1	2365.0
52.5°	2154.7	2198.2	2261.7	2233.3	2189.9
55°	1992.0	2032.3	2085.3	2055.1	2021.3
57.5°	1828.0	1868.7	1909.3	1878.7	1849.5
60°	1662.6	1698.2	1731.6	1700.5	1678.1
62.5°	1494.4	1525.0	1553.8	1524.1	1503.1
65°	1324.4	1351.3	1375.1	1347.7	1325.3
67.5°	1155.3	1178.1	1200.1	1171.7	1148.4
70°	986.2	1005.8	1026.0	996.7	975.2
72.5°	819.4	836.8	854.6	826.2	807.5
75°	657.2	672.2	686.9	661.7	647.1
77.5°	502.2	515.0	525.1	509.1	494.9
80°	358.3	367.9	373.8	367.4	354.2
82.5°	230.3	237.2	240.4	239.9	231.2
85°	125.2	127.5	133.4	134.8	130.2
87.5°	48.4	51.6	53.0	57.1	52.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)