

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: P489715

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-40-120-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: P489715
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-LD4-4STD-40-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

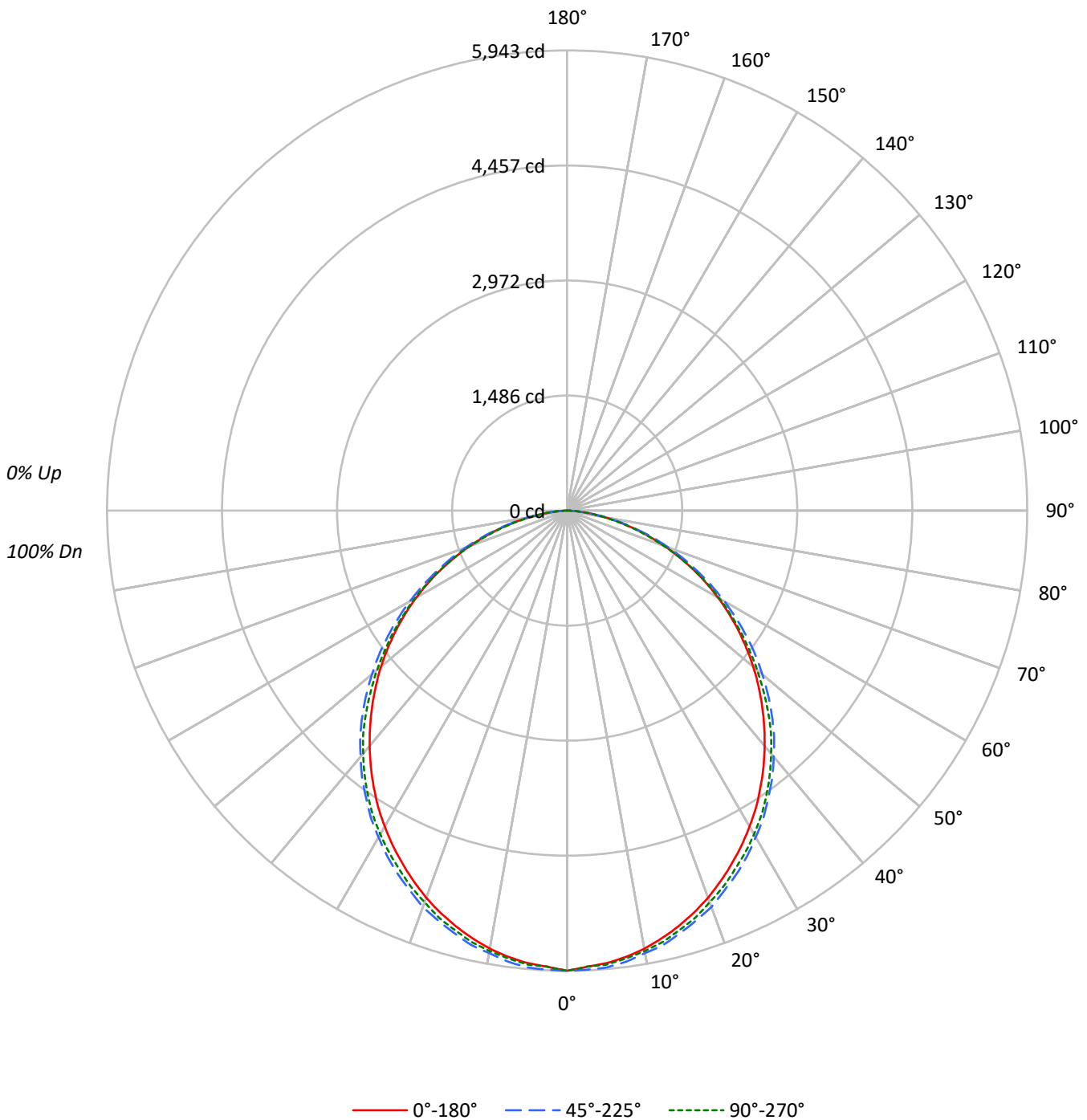
Lumens per Lamp: N/A
Luminaire Lumens: 15624.8 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	7996	7996	7996
5°	7922	7997	7948
10°	7850	7929	7891
15°	7741	7866	7811
20°	7619	7800	7706
25°	7471	7688	7600
30°	7320	7568	7499
35°	7155	7439	7370
40°	6969	7290	7198
45°	6774	7115	6981
50°	6570	6887	6707
55°	6332	6628	6424
60°	6062	6314	6118
65°	5713	5932	5717
70°	5257	5469	5198
75°	4629	4838	4558
80°	3762	3925	3718
85°	2620	2791	2725



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.7	3.6
10°-20°	1586.1	10.2
20°-30°	2365.6	15.1
30°-40°	2803.3	17.9
40°-50°	2836.5	18.2
50°-60°	2477.3	15.9
60°-70°	1810.3	11.6
70°-80°	963.2	6.2
80°-90°	222.6	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°	4511.5	28.9
0°-40°	7314.8	46.8
0°-60°	12628.6	80.8
0°-90°	15624.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15624.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5943	5943	5943	5943	5943	
5°	5866	5877	5921	5934	5884	556
15°	5557	5594	5647	5681	5608	1567
25°	5032	5094	5178	5198	5119	2318
35°	4356	4424	4529	4560	4487	2724
45°	3560	3623	3739	3742	3669	2746
55°	2699	2754	2825	2785	2739	2413
65°	1794	1831	1863	1826	1796	1776
75°	890	911	931	897	877	947
85°	170	173	181	183	176	215
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5943.1	5943.1	5943.1	5943.1	5943.1
2.5°	5896.7	5915.9	5935.7	5944.4	5896.1
5°	5865.7	5876.9	5920.8	5934.4	5884.3
7.5°	5814.9	5831.7	5874.4	5880.6	5832.3
10°	5745.6	5775.3	5803.8	5834.8	5775.9
12.5°	5657.0	5697.3	5745.6	5751.2	5706.6
15°	5557.4	5594.5	5647.1	5681.2	5607.5
17.5°	5445.9	5481.8	5549.9	5556.1	5511.5
20°	5321.4	5366.0	5447.8	5462.0	5382.1
22.5°	5180.3	5240.3	5308.4	5322.1	5263.2
25°	5032.3	5094.2	5178.4	5197.6	5119.0
27.5°	4877.5	4936.9	5031.6	5045.3	4979.0
30°	4711.5	4767.2	4871.3	4894.2	4826.7
32.5°	4543.1	4598.8	4714.0	4733.2	4667.6
35°	4356.1	4424.2	4528.9	4560.4	4486.8
37.5°	4165.4	4231.6	4350.5	4379.0	4299.8
40°	3967.9	4033.5	4150.5	4174.1	4097.9
42.5°	3766.0	3831.6	3956.7	3960.4	3897.3
45°	3559.8	3623.0	3739.4	3742.5	3668.8
47.5°	3350.5	3414.3	3518.3	3506.6	3437.2
50°	3138.7	3199.4	3290.4	3266.9	3204.4
52.5°	2919.5	2978.4	3064.4	3026.0	2967.2
55°	2699.1	2753.6	2825.4	2784.6	2738.7
57.5°	2476.8	2531.9	2587.0	2545.5	2505.9
60°	2252.7	2301.0	2346.2	2304.1	2273.7
62.5°	2024.8	2066.3	2105.3	2065.0	2036.6
65°	1794.5	1831.0	1863.2	1826.0	1795.7
67.5°	1565.3	1596.3	1626.0	1587.6	1556.1
70°	1336.2	1362.9	1390.1	1350.5	1321.4
72.5°	1110.2	1133.8	1157.9	1119.5	1094.1
75°	890.4	910.8	930.7	896.6	876.8
77.5°	680.5	697.8	711.5	689.8	670.6
80°	485.5	498.5	506.5	497.8	479.9
82.5°	312.1	321.4	325.7	325.1	313.3
85°	169.7	172.8	180.8	182.7	176.5
87.5°	65.6	70.0	71.8	77.4	71.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)