

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: P489739

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489739
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
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

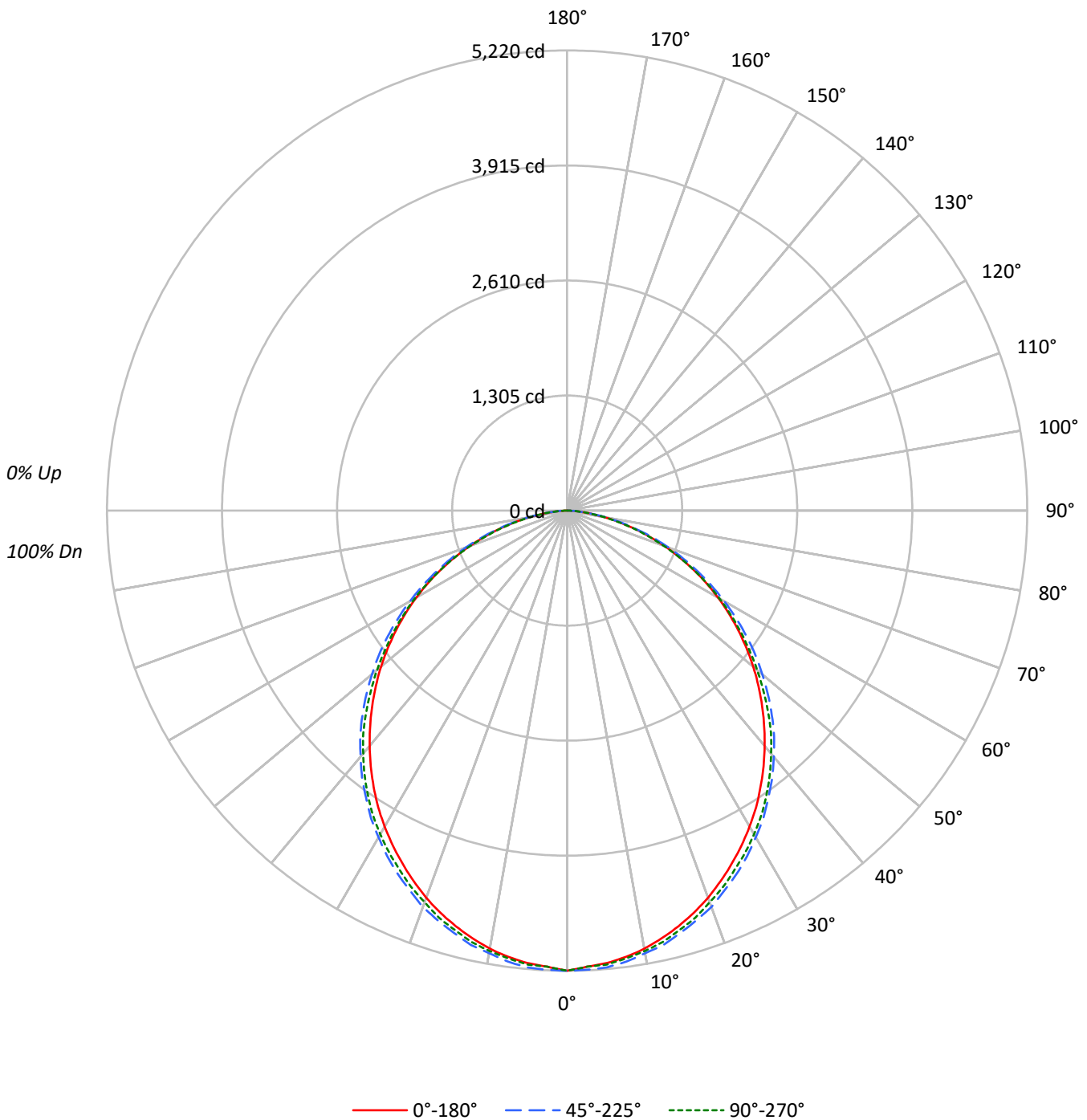
Lumens per Lamp: N/A
Luminaire Lumens: 13724.5 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P489739

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5LO-40-120-EDD

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	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°	7024	7024	7024
5°	6959	7024	6981
10°	6895	6965	6932
15°	6800	6909	6861
20°	6693	6852	6769
25°	6562	6753	6675
30°	6430	6648	6587
35°	6285	6534	6473
40°	6122	6403	6322
45°	5950	6250	6132
50°	5771	6050	5892
55°	5561	5822	5643
60°	5325	5546	5374
65°	5018	5210	5022
70°	4617	4803	4566
75°	4066	4250	4004
80°	3304	3447	3266
85°	2300	2452	2393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	491.6	3.6
10°-20°	1393.2	10.2
20°-30°	2077.9	15.1
30°-40°	2462.4	17.9
40°-50°	2491.6	18.2
50°-60°	2176.0	15.9
60°-70°	1590.1	11.6
70°-80°	846.1	6.2
80°-90°	195.5	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°	3962.8	28.9
0°-40°	6425.2	46.8
0°-60°	11092.7	80.8
0°-90°	13724.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13724.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5220	5220	5220	5220	5220	
5°	5152	5162	5201	5213	5169	489
15°	4882	4914	4960	4990	4926	1376
25°	4420	4475	4549	4566	4496	2036
35°	3826	3886	3978	4006	3941	2393
45°	3127	3182	3285	3287	3223	2412
55°	2371	2419	2482	2446	2406	2119
65°	1576	1608	1637	1604	1577	1560
75°	782	800	818	788	770	832
85°	149	152	159	160	155	189
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5220.3	5220.3	5220.3	5220.3	5220.3
2.5°	5179.5	5196.4	5213.8	5221.4	5179.0
5°	5152.3	5162.1	5200.7	5212.7	5168.6
7.5°	5107.7	5122.4	5159.9	5165.4	5123.0
10°	5046.8	5072.9	5097.9	5125.1	5073.5
12.5°	4969.0	5004.4	5046.8	5051.7	5012.5
15°	4881.5	4914.1	4960.3	4990.2	4925.5
17.5°	4783.6	4815.1	4874.9	4880.4	4841.2
20°	4674.2	4713.4	4785.2	4797.7	4727.5
22.5°	4550.2	4603.0	4662.8	4674.8	4623.1
25°	4420.2	4474.6	4548.6	4565.5	4496.4
27.5°	4284.3	4336.5	4419.7	4431.7	4373.5
30°	4138.5	4187.5	4278.8	4299.0	4239.7
32.5°	3990.6	4039.5	4140.7	4157.5	4099.9
35°	3826.3	3886.1	3978.1	4005.8	3941.1
37.5°	3658.8	3717.0	3821.4	3846.4	3776.8
40°	3485.3	3542.9	3645.7	3666.4	3599.5
42.5°	3308.0	3365.6	3475.5	3478.8	3423.3
45°	3126.9	3182.3	3284.6	3287.3	3222.6
47.5°	2943.0	2999.0	3090.4	3080.1	3019.2
50°	2757.0	2810.3	2890.3	2869.6	2814.7
52.5°	2564.5	2616.1	2691.7	2658.0	2606.3
55°	2370.8	2418.7	2481.8	2445.9	2405.7
57.5°	2175.6	2224.0	2272.4	2236.0	2201.1
60°	1978.7	2021.1	2060.8	2023.8	1997.2
62.5°	1778.5	1815.0	1849.2	1813.9	1788.9
65°	1576.2	1608.3	1636.6	1603.9	1577.3
67.5°	1375.0	1402.2	1428.3	1394.5	1366.8
70°	1173.7	1197.1	1221.0	1186.2	1160.7
72.5°	975.2	995.9	1017.1	983.4	961.1
75°	782.1	800.1	817.5	787.6	770.2
77.5°	597.7	613.0	624.9	605.9	589.0
80°	426.4	437.8	444.9	437.3	421.5
82.5°	274.1	282.3	286.1	285.5	275.2
85°	149.0	151.7	158.8	160.4	155.0
87.5°	57.7	61.5	63.1	68.0	62.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)