

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: P489717

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-50-120-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: P489717
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-50-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

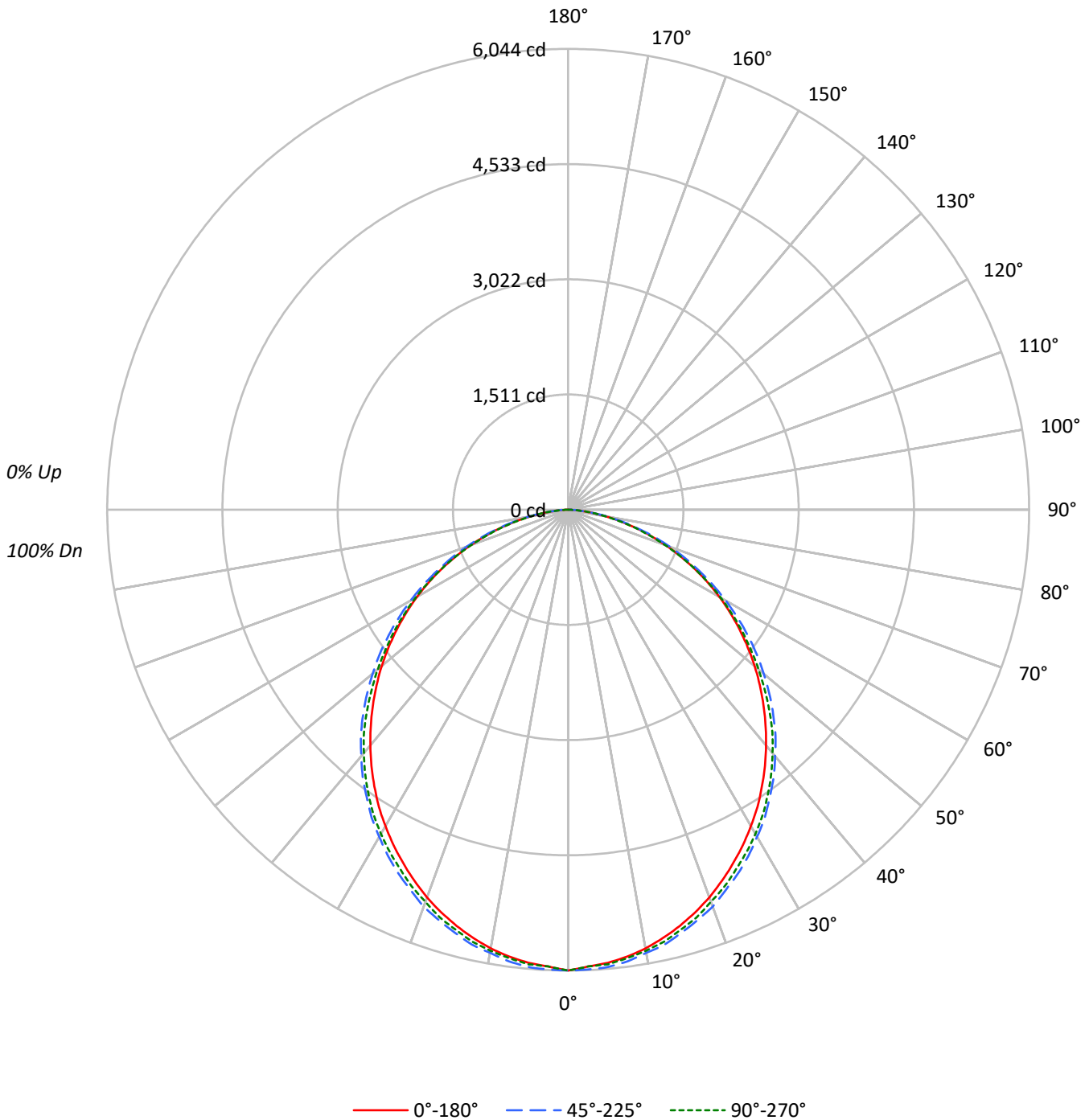
Lumens per Lamp: N/A
Luminaire Lumens: 15889.9 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	8132	8132	8132
5°	8057	8133	8082
10°	7983	8064	8025
15°	7872	8000	7943
20°	7749	7933	7837
25°	7598	7818	7728
30°	7444	7697	7626
35°	7276	7565	7495
40°	7087	7414	7320
45°	6889	7236	7099
50°	6682	7005	6821
55°	6439	6740	6533
60°	6165	6421	6222
65°	5810	6032	5814
70°	5346	5561	5286
75°	4707	4920	4636
80°	3825	3991	3781
85°	2663	2839	2771



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.2	3.6
10°-20°	1613.1	10.2
20°-30°	2405.8	15.1
30°-40°	2850.9	17.9
40°-50°	2884.6	18.2
50°-60°	2519.3	15.9
60°-70°	1841.0	11.6
70°-80°	979.6	6.2
80°-90°	226.4	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°	4588.1	28.9
0°-40°	7438.9	46.8
0°-60°	12842.9	80.8
0°-90°	15889.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15889.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6044	6044	6044	6044	6044	
5°	5965	5977	6021	6035	5984	566
15°	5652	5689	5743	5778	5703	1593
25°	5118	5181	5266	5286	5206	2358
35°	4430	4499	4606	4638	4563	2770
45°	3620	3684	3803	3806	3731	2793
55°	2745	2800	2873	2832	2785	2454
65°	1825	1862	1895	1857	1826	1806
75°	906	926	946	912	892	963
85°	172	176	184	186	180	218
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6044.0	6044.0	6044.0	6044.0	6044.0
2.5°	5996.7	6016.2	6036.4	6045.2	5996.1
5°	5965.2	5976.6	6021.3	6035.1	5984.1
7.5°	5913.6	5930.6	5974.1	5980.4	5931.2
10°	5843.1	5873.3	5902.3	5933.8	5873.9
12.5°	5753.0	5794.0	5843.1	5848.7	5803.4
15°	5651.6	5689.4	5743.0	5777.6	5702.6
17.5°	5538.3	5574.8	5644.1	5650.4	5605.0
20°	5411.7	5457.1	5540.2	5554.7	5473.4
22.5°	5268.2	5329.2	5398.5	5412.4	5352.5
25°	5117.6	5180.6	5266.3	5285.8	5205.8
27.5°	4960.2	5020.7	5117.0	5130.9	5063.5
30°	4791.5	4848.1	4953.9	4977.2	4908.6
32.5°	4620.2	4676.9	4794.0	4813.5	4746.8
35°	4430.0	4499.3	4605.7	4637.8	4562.9
37.5°	4236.1	4303.4	4424.3	4453.3	4372.7
40°	4035.2	4101.9	4220.9	4244.9	4167.4
42.5°	3829.9	3896.6	4023.8	4027.6	3963.4
45°	3620.2	3684.4	3802.8	3806.0	3731.0
47.5°	3407.4	3472.2	3578.0	3566.0	3495.5
50°	3192.0	3253.7	3346.3	3322.3	3258.7
52.5°	2969.1	3028.9	3116.4	3077.4	3017.6
55°	2744.9	2800.3	2873.4	2831.8	2785.2
57.5°	2518.8	2574.9	2630.9	2588.7	2548.4
60°	2290.9	2340.0	2386.0	2343.1	2312.3
62.5°	2059.2	2101.3	2141.0	2100.1	2071.1
65°	1824.9	1862.1	1894.8	1857.0	1826.2
67.5°	1591.9	1623.4	1653.6	1614.6	1582.5
70°	1358.9	1386.0	1413.7	1373.4	1343.8
72.5°	1129.1	1153.0	1177.6	1138.5	1112.7
75°	905.5	926.3	946.5	911.8	891.7
77.5°	692.1	709.7	723.5	701.5	682.0
80°	493.7	506.9	515.1	506.3	488.0
82.5°	317.4	326.8	331.2	330.6	318.6
85°	172.5	175.7	183.9	185.8	179.5
87.5°	66.7	71.2	73.0	78.7	72.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)