

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: P489150

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-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: P489150
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-24-2-INS-A19156-LD4-4HI-40-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

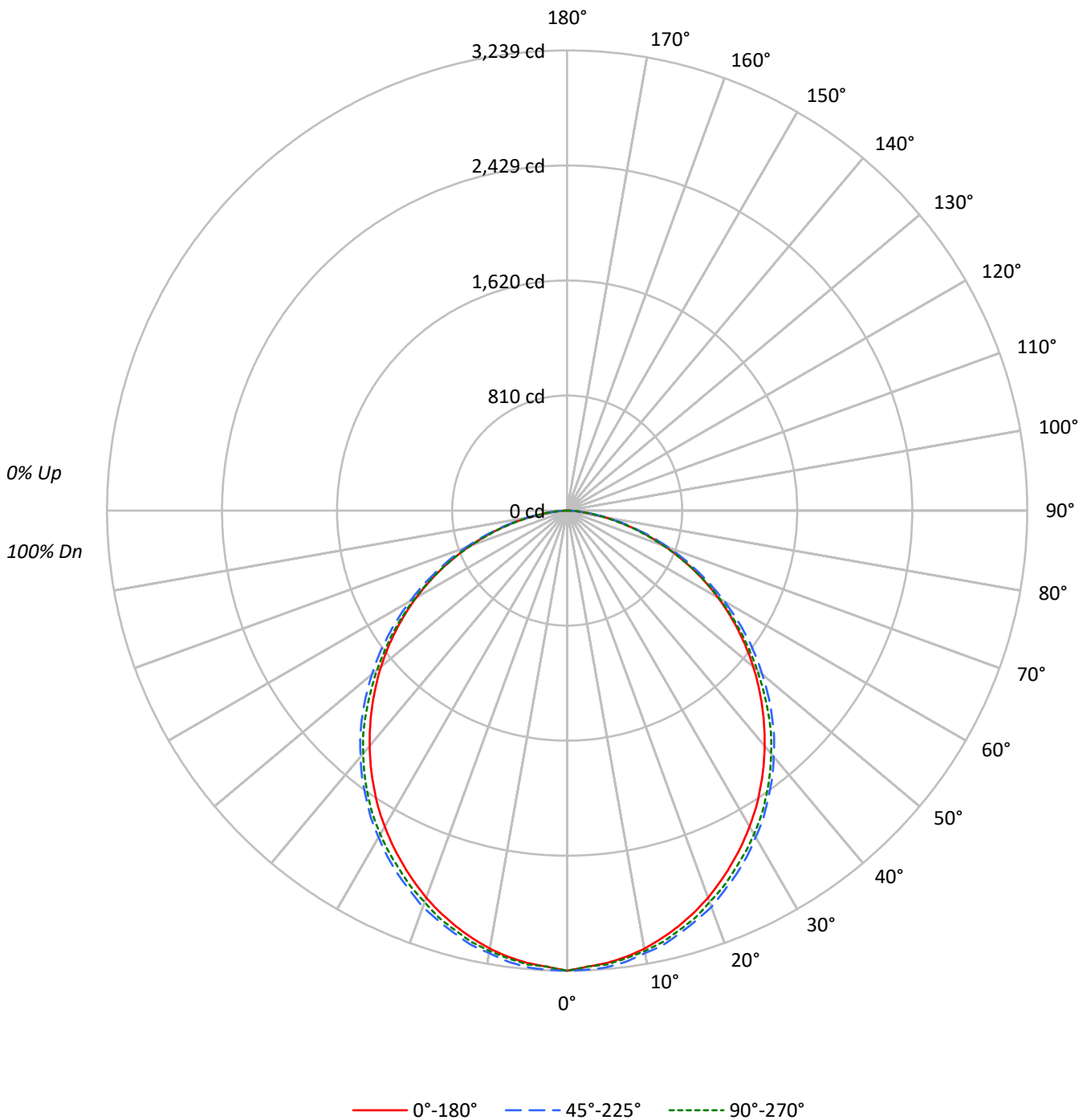
Lumens per Lamp: N/A
Luminaire Lumens: 8515.4 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8716	8716	8716
5°	8635	8716	8663
10°	8556	8643	8601
15°	8438	8574	8514
20°	8305	8502	8400
25°	8143	8380	8283
30°	7979	8249	8174
35°	7799	8108	8033
40°	7596	7946	7845
45°	7383	7755	7609
50°	7161	7508	7311
55°	6901	7224	7003
60°	6607	6881	6669
65°	6227	6465	6231
70°	5729	5961	5666
75°	5046	5273	4968
80°	4100	4277	4052
85°	2856	3041	2970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.0	3.6
10°-20°	864.4	10.2
20°-30°	1289.3	15.1
30°-40°	1527.8	17.9
40°-50°	1545.9	18.2
50°-60°	1350.1	15.9
60°-70°	986.6	11.6
70°-80°	524.9	6.2
80°-90°	121.3	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°	2458.7	28.9
0°-40°	3986.5	46.8
0°-60°	6882.5	80.8
0°-90°	8515.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8515.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3239	3239	3239	3239	3239	
5°	3197	3203	3227	3234	3207	303
15°	3029	3049	3078	3096	3056	854
25°	2742	2776	2822	2833	2790	1264
35°	2374	2411	2468	2485	2445	1485
45°	1940	1974	2038	2040	2000	1497
55°	1471	1501	1540	1518	1493	1315
65°	978	998	1015	995	979	968
75°	485	496	507	489	478	516
85°	92	94	98	100	96	117
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3239.0	3239.0	3239.0	3239.0	3239.0
2.5°	3213.6	3224.1	3234.9	3239.6	3213.3
5°	3196.8	3202.8	3226.8	3234.2	3206.9
7.5°	3169.1	3178.2	3201.5	3204.9	3178.5
10°	3131.3	3147.5	3163.0	3179.9	3147.8
12.5°	3083.0	3105.0	3131.3	3134.3	3110.0
15°	3028.7	3049.0	3077.6	3096.2	3056.1
17.5°	2968.0	2987.5	3024.7	3028.0	3003.7
20°	2900.1	2924.4	2969.0	2976.7	2933.2
22.5°	2823.2	2855.9	2893.1	2900.5	2868.4
25°	2742.5	2776.3	2822.2	2832.7	2789.8
27.5°	2658.2	2690.6	2742.2	2749.6	2713.5
30°	2567.7	2598.1	2654.8	2667.3	2630.5
32.5°	2476.0	2506.3	2569.1	2579.6	2543.8
35°	2374.0	2411.2	2468.2	2485.4	2445.2
37.5°	2270.1	2306.2	2371.0	2386.5	2343.3
40°	2162.5	2198.2	2262.0	2274.8	2233.3
42.5°	2052.4	2088.2	2156.4	2158.4	2124.0
45°	1940.1	1974.5	2037.9	2039.6	1999.5
47.5°	1826.0	1860.8	1917.5	1911.0	1873.2
50°	1710.6	1743.7	1793.3	1780.4	1746.4
52.5°	1591.1	1623.2	1670.1	1649.2	1617.1
55°	1471.0	1500.7	1539.8	1517.6	1492.6
57.5°	1349.8	1379.9	1409.9	1387.3	1365.7
60°	1227.7	1254.0	1278.6	1255.7	1239.2
62.5°	1103.5	1126.1	1147.4	1125.4	1109.9
65°	978.0	997.9	1015.4	995.2	978.6
67.5°	853.1	870.0	886.2	865.3	848.0
70°	728.2	742.8	757.6	736.0	720.1
72.5°	605.1	617.9	631.1	610.1	596.3
75°	485.3	496.4	507.2	488.6	477.8
77.5°	370.9	380.3	387.7	375.9	365.5
80°	264.6	271.7	276.0	271.3	261.5
82.5°	170.1	175.1	177.5	177.2	170.8
85°	92.5	94.2	98.5	99.6	96.2
87.5°	35.8	38.1	39.1	42.2	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)