

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: P489618

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-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: P489618
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-LD4-2HI-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

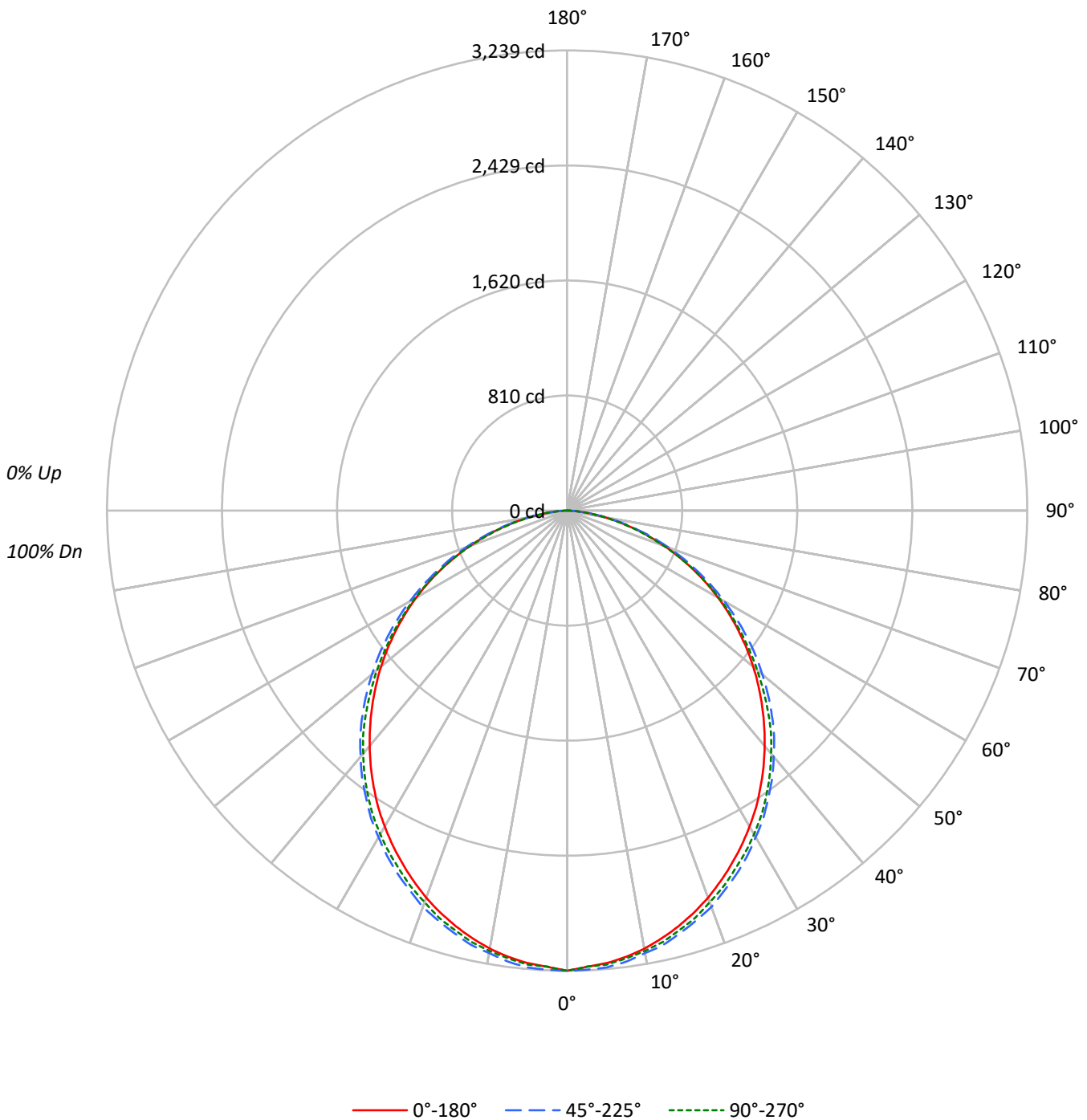
Lumens per Lamp: N/A
Luminaire Lumens: 8515.7 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4358	4358	4358
5°	4318	4358	4331
10°	4278	4322	4301
15°	4219	4287	4257
20°	4153	4251	4200
25°	4072	4190	4142
30°	3989	4125	4087
35°	3900	4054	4017
40°	3798	3973	3923
45°	3692	3878	3805
50°	3581	3754	3656
55°	3451	3612	3501
60°	3304	3441	3335
65°	3114	3233	3116
70°	2865	2980	2833
75°	2523	2637	2484
80°	2050	2139	2026
85°	1428	1521	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.1	3.6
10°-20°	864.5	10.2
20°-30°	1289.3	15.1
30°-40°	1527.8	17.9
40°-50°	1545.9	18.2
50°-60°	1350.2	15.9
60°-70°	986.6	11.6
70°-80°	525.0	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°	2458.8	28.9
0°-40°	3986.7	46.8
0°-60°	6882.8	80.8
0°-90°	8515.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8515.7	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°	2743	2776	2822	2833	2790	1264
35°	2374	2411	2468	2486	2445	1485
45°	1940	1975	2038	2040	2000	1497
55°	1471	1501	1540	1518	1493	1315
65°	978	998	1016	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°	3239.1	3239.1	3239.1	3239.1	3239.1
2.5°	3213.8	3224.2	3235.0	3239.7	3213.4
5°	3196.9	3203.0	3226.9	3234.3	3207.0
7.5°	3169.2	3178.3	3201.6	3205.0	3178.7
10°	3131.4	3147.6	3163.1	3180.0	3148.0
12.5°	3083.2	3105.1	3131.4	3134.5	3110.2
15°	3028.8	3049.1	3077.8	3096.3	3056.2
17.5°	2968.1	2987.7	3024.8	3028.1	3003.9
20°	2900.2	2924.5	2969.1	2976.9	2933.3
22.5°	2823.3	2856.0	2893.2	2900.6	2868.5
25°	2742.6	2776.4	2822.3	2832.8	2789.9
27.5°	2658.3	2690.7	2742.3	2749.7	2713.6
30°	2567.8	2598.2	2654.9	2667.4	2630.6
32.5°	2476.0	2506.4	2569.2	2579.6	2543.9
35°	2374.1	2411.2	2468.3	2485.5	2445.3
37.5°	2270.2	2306.3	2371.1	2386.6	2343.4
40°	2162.5	2198.3	2262.1	2274.9	2233.4
42.5°	2052.5	2088.3	2156.5	2158.5	2124.1
45°	1940.1	1974.6	2038.0	2039.7	1999.5
47.5°	1826.1	1860.8	1917.5	1911.1	1873.3
50°	1710.7	1743.7	1793.3	1780.5	1746.4
52.5°	1591.2	1623.2	1670.2	1649.2	1617.2
55°	1471.0	1500.7	1539.9	1517.6	1492.6
57.5°	1349.9	1379.9	1410.0	1387.4	1365.8
60°	1227.7	1254.1	1278.7	1255.7	1239.2
62.5°	1103.5	1126.1	1147.4	1125.5	1109.9
65°	978.0	997.9	1015.5	995.2	978.7
67.5°	853.1	870.0	886.2	865.3	848.1
70°	728.3	742.8	757.6	736.0	720.2
72.5°	605.1	617.9	631.1	610.2	596.3
75°	485.3	496.4	507.2	488.7	477.9
77.5°	370.9	380.3	387.8	375.9	365.5
80°	264.6	271.7	276.1	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)