

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: P488714

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3HI-30-120-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: P488714
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-12-4-INS-A19156-LD4-3HI-30-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11039.9 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

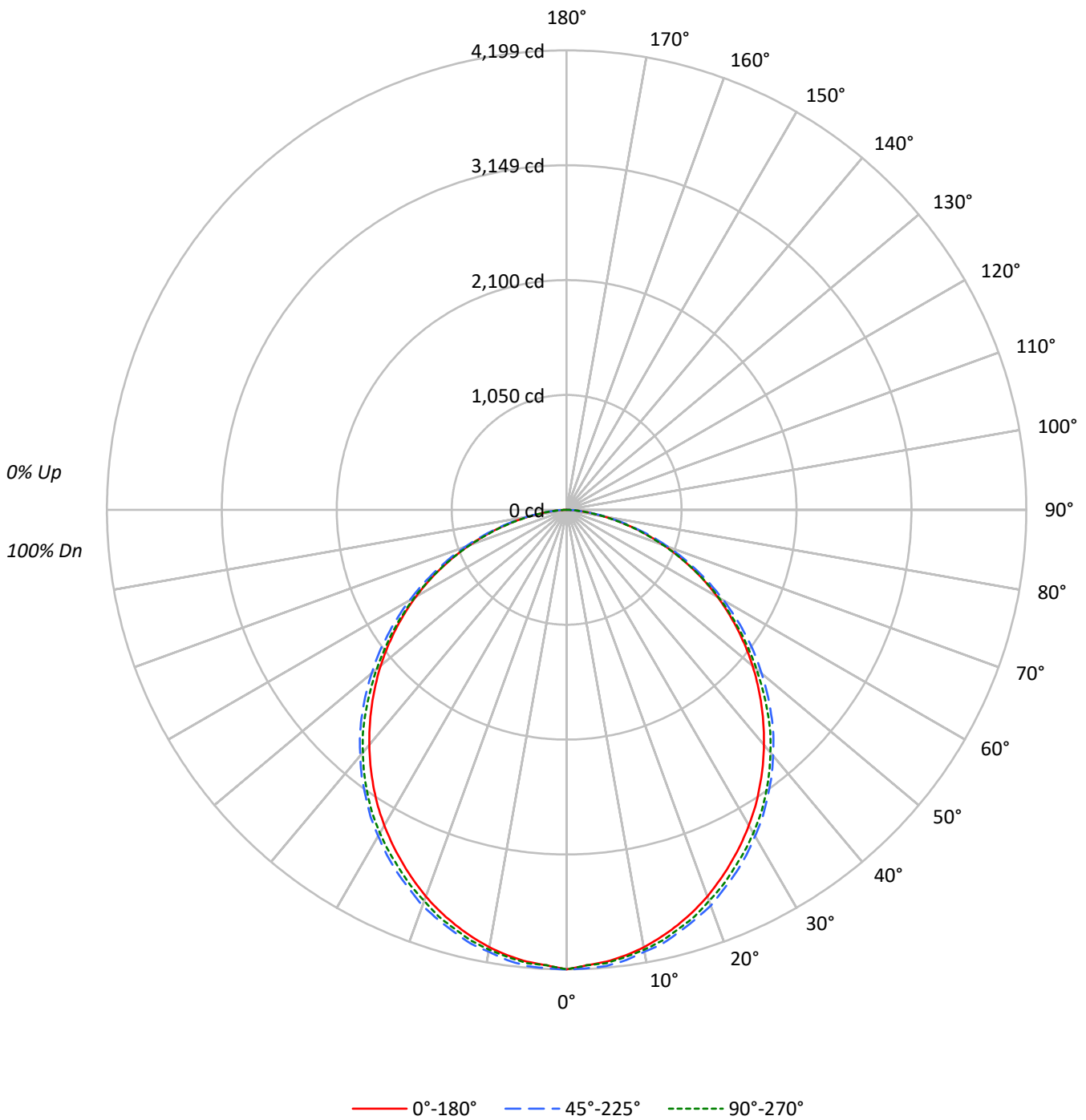
Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11300	11300	11300
5°	11195	11300	11231
10°	11093	11205	11152
15°	10939	11116	11038
20°	10767	11023	10890
25°	10557	10864	10739
30°	10344	10695	10597
35°	10111	10512	10414
40°	9848	10302	10171
45°	9572	10055	9865
50°	9284	9733	9478
55°	8947	9366	9079
60°	8566	8922	8646
65°	8073	8383	8079
70°	7428	7728	7345
75°	6541	6837	6441
80°	5315	5546	5255
85°	3702	3946	3850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.5	3.6
10°-20°	1120.7	10.2
20°-30°	1671.5	15.1
30°-40°	1980.7	17.9
40°-50°	2004.2	18.2
50°-60°	1750.4	15.9
60°-70°	1279.1	11.6
70°-80°	680.6	6.2
80°-90°	157.3	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°	3187.7	28.9
0°-40°	5168.4	46.8
0°-60°	8922.9	80.8
0°-90°	11039.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11039.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4199	4199	4199	4199	4199	
5°	4144	4152	4183	4193	4158	393
15°	3927	3953	3990	4014	3962	1107
25°	3556	3599	3659	3672	3617	1638
35°	3078	3126	3200	3222	3170	1925
45°	2515	2560	2642	2644	2592	1940
55°	1907	1946	1996	1968	1935	1705
65°	1268	1294	1316	1290	1269	1255
75°	629	644	658	634	620	669
85°	120	122	128	129	125	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4199.2	4199.2	4199.2	4199.2	4199.2
2.5°	4166.4	4179.9	4193.9	4200.1	4165.9
5°	4144.5	4152.4	4183.4	4193.1	4157.6
7.5°	4108.6	4120.4	4150.6	4155.0	4120.9
10°	4059.6	4080.6	4100.7	4122.6	4081.1
12.5°	3997.1	4025.5	4059.6	4063.6	4032.1
15°	3926.6	3952.9	3990.1	4014.1	3962.1
17.5°	3847.9	3873.2	3921.4	3925.7	3894.2
20°	3759.9	3791.4	3849.2	3859.2	3802.8
22.5°	3660.2	3702.6	3750.7	3760.4	3718.8
25°	3555.6	3599.4	3658.9	3672.4	3616.9
27.5°	3446.2	3488.2	3555.2	3564.8	3518.0
30°	3329.0	3368.4	3441.9	3458.0	3410.4
32.5°	3210.0	3249.4	3330.7	3344.3	3297.9
35°	3077.9	3126.0	3199.9	3222.2	3170.2
37.5°	2943.1	2989.9	3073.9	3094.0	3038.0
40°	2803.5	2849.9	2932.6	2949.2	2895.4
42.5°	2660.9	2707.3	2795.7	2798.3	2753.7
45°	2515.2	2559.8	2642.1	2644.3	2592.2
47.5°	2367.3	2412.4	2485.9	2477.6	2428.6
50°	2217.7	2260.6	2324.9	2308.3	2264.1
52.5°	2062.8	2104.4	2165.2	2138.1	2096.5
55°	1907.1	1945.6	1996.3	1967.5	1935.1
57.5°	1750.0	1789.0	1827.9	1798.6	1770.6
60°	1591.6	1625.8	1657.7	1628.0	1606.5
62.5°	1430.6	1460.0	1487.5	1459.1	1439.0
65°	1267.9	1293.7	1316.5	1290.2	1268.8
67.5°	1106.0	1127.9	1148.9	1121.8	1099.5
70°	944.1	963.0	982.2	954.2	933.6
72.5°	784.4	801.1	818.1	791.0	773.1
75°	629.1	643.6	657.6	633.5	619.5
77.5°	480.8	493.1	502.7	487.4	473.8
80°	343.0	352.2	357.9	351.8	339.1
82.5°	220.5	227.1	230.1	229.7	221.4
85°	119.9	122.1	127.8	129.1	124.7
87.5°	46.4	49.4	50.8	54.7	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)