

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: P489656

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-50-120-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: P489656
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-LD4-3HI-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

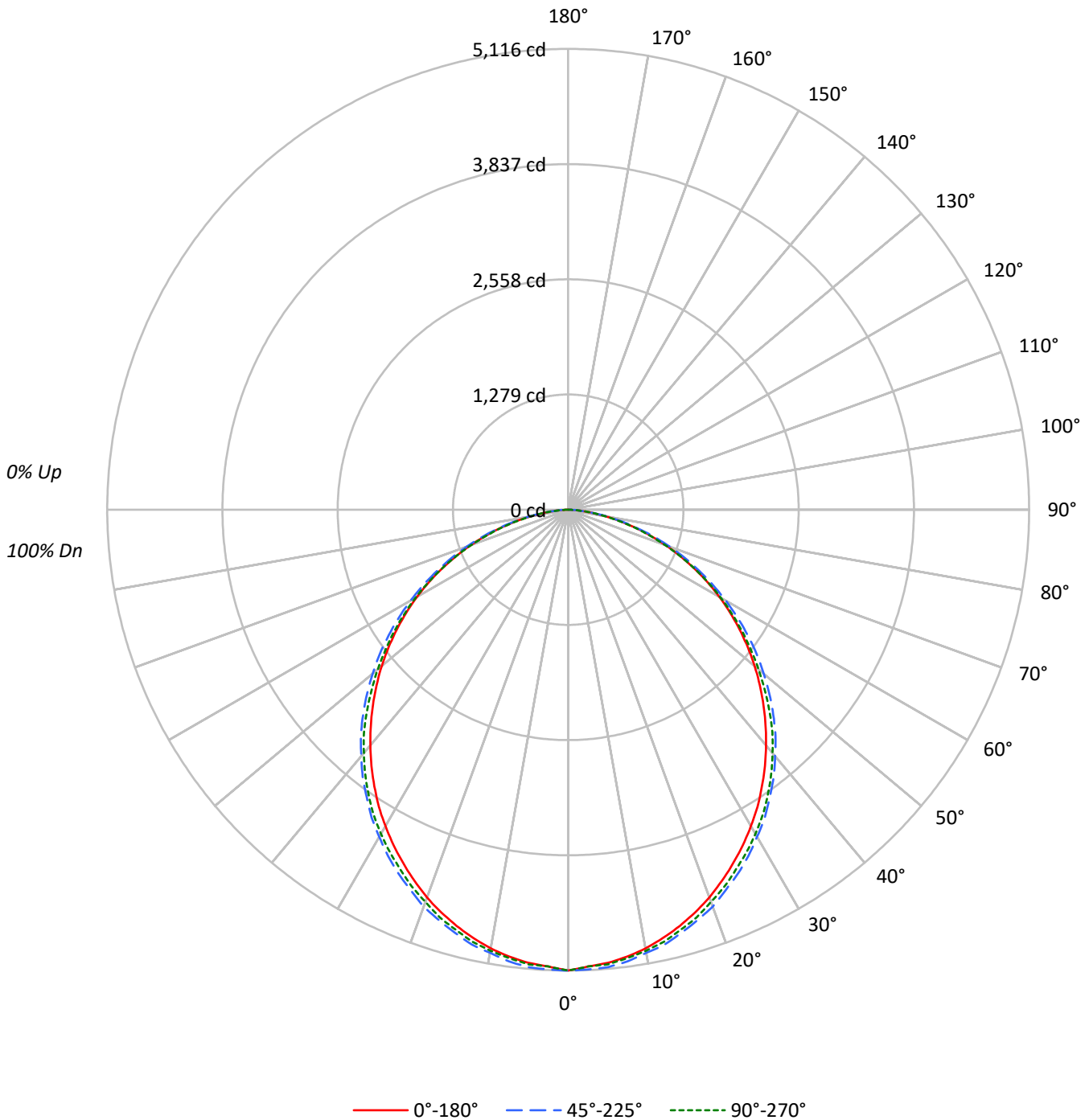
Lumens per Lamp: N/A
Luminaire Lumens: 13450.6 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6884	6884	6884
5°	6820	6884	6842
10°	6758	6826	6793
15°	6664	6772	6724
20°	6559	6715	6634
25°	6431	6618	6542
30°	6301	6515	6456
35°	6159	6404	6344
40°	5999	6276	6196
45°	5831	6125	6010
50°	5656	5929	5774
55°	5450	5706	5530
60°	5218	5435	5267
65°	4918	5106	4921
70°	4525	4708	4475
75°	3985	4165	3924
80°	3238	3378	3201
85°	2255	2402	2345



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.8	3.6
10°-20°	1365.4	10.2
20°-30°	2036.5	15.1
30°-40°	2413.2	17.9
40°-50°	2441.8	18.2
50°-60°	2132.6	15.9
60°-70°	1558.4	11.6
70°-80°	829.2	6.2
80°-90°	191.6	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°	3883.7	28.9
0°-40°	6297.0	46.8
0°-60°	10871.3	80.8
0°-90°	13450.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13450.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5116	5116	5116	5116	5116	
5°	5050	5059	5097	5109	5066	479
15°	4784	4816	4861	4891	4827	1349
25°	4332	4385	4458	4474	4407	1996
35°	3750	3809	3899	3926	3862	2345
45°	3064	3119	3219	3222	3158	2364
55°	2324	2370	2432	2397	2358	2077
65°	1545	1576	1604	1572	1546	1529
75°	766	784	801	772	755	815
85°	146	149	156	157	152	185
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5116.1	5116.1	5116.1	5116.1	5116.1
2.5°	5076.2	5092.7	5109.7	5117.2	5075.6
5°	5049.5	5059.1	5096.9	5108.7	5065.5
7.5°	5005.8	5020.2	5057.0	5062.3	5020.7
10°	4946.1	4971.7	4996.2	5022.8	4972.2
12.5°	4869.9	4904.5	4946.1	4950.9	4912.5
15°	4784.0	4816.0	4861.3	4890.7	4827.2
17.5°	4688.1	4719.0	4777.6	4783.0	4744.6
20°	4581.0	4619.3	4689.7	4702.0	4633.2
22.5°	4459.4	4511.1	4569.8	4581.5	4530.9
25°	4332.0	4385.3	4457.8	4474.3	4406.7
27.5°	4198.8	4249.9	4331.5	4343.2	4286.2
30°	4055.9	4103.9	4193.4	4213.2	4155.1
32.5°	3910.9	3958.9	4058.0	4074.6	4018.1
35°	3749.9	3808.6	3898.7	3925.8	3862.4
37.5°	3585.8	3642.8	3745.1	3769.7	3701.4
40°	3415.7	3472.2	3573.0	3593.2	3527.7
42.5°	3242.0	3298.5	3406.1	3409.3	3355.0
45°	3064.5	3118.8	3219.0	3221.7	3158.3
47.5°	2884.3	2939.2	3028.7	3018.6	2958.9
50°	2702.0	2754.2	2832.6	2812.3	2758.5
52.5°	2513.3	2563.9	2638.0	2605.0	2554.3
55°	2323.5	2370.4	2432.3	2397.1	2357.6
57.5°	2132.2	2179.6	2227.0	2191.3	2157.2
60°	1939.2	1980.8	2019.7	1983.4	1957.3
62.5°	1743.0	1778.8	1812.3	1777.7	1753.2
65°	1544.8	1576.2	1603.9	1571.9	1545.8
67.5°	1347.5	1374.2	1399.8	1366.7	1339.5
70°	1150.3	1173.2	1196.7	1162.6	1137.5
72.5°	955.7	976.0	996.8	963.7	941.9
75°	766.5	784.1	801.2	771.8	754.8
77.5°	585.8	600.7	612.5	593.8	577.3
80°	417.9	429.1	436.0	428.6	413.1
82.5°	268.7	276.6	280.4	279.8	269.7
85°	146.1	148.7	155.6	157.2	151.9
87.5°	56.5	60.2	61.8	66.6	61.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)