

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: P489687

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-30-120-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: P489687
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-LD4-4HI-30-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

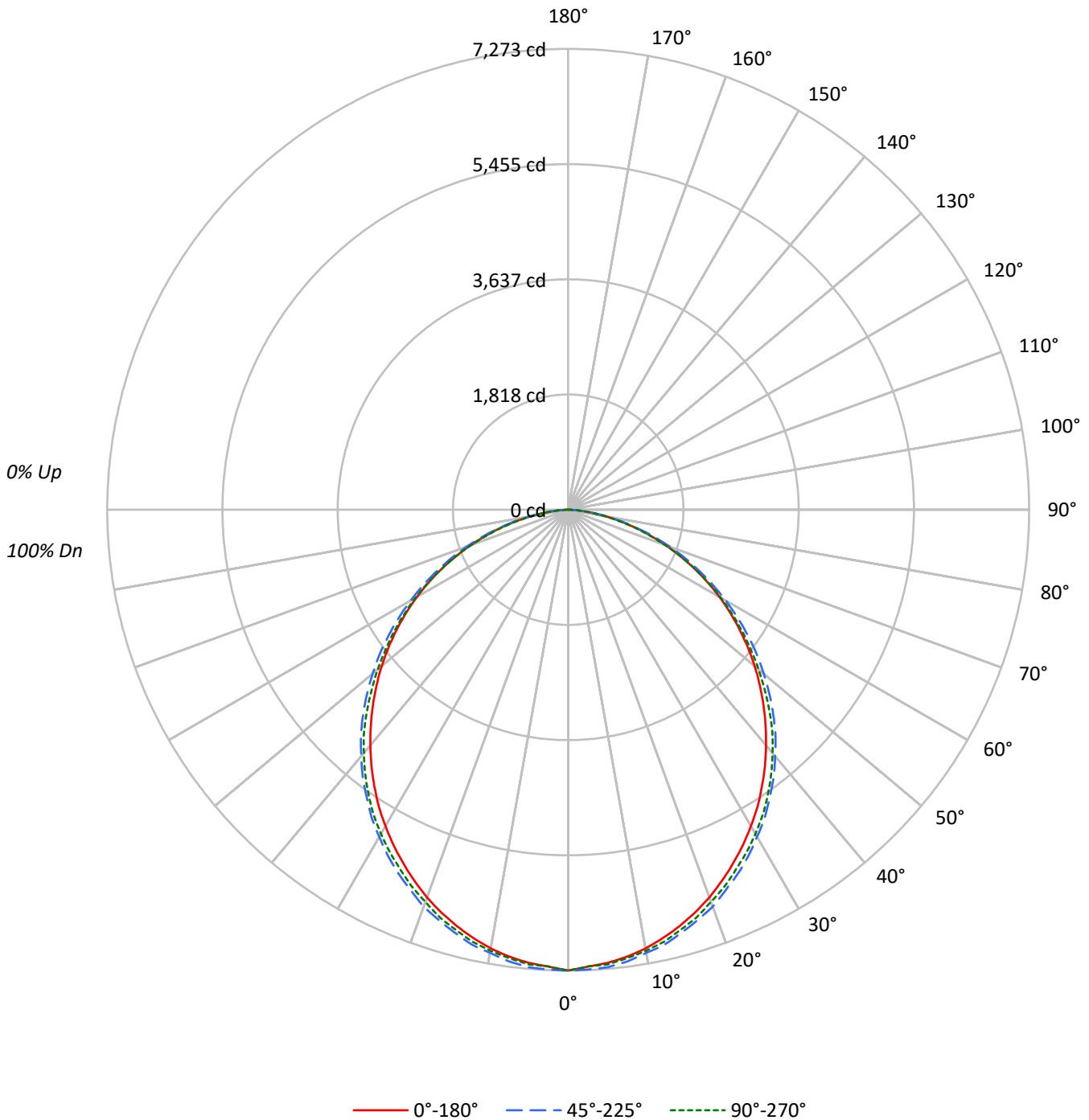
Lumens per Lamp: N/A
Luminaire Lumens: 19121.3 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	9786	9786	9786
5°	9695	9786	9726
10°	9606	9704	9657
15°	9473	9626	9559
20°	9325	9546	9431
25°	9143	9408	9300
30°	8958	9262	9177
35°	8756	9103	9019
40°	8529	8921	8808
45°	8289	8708	8543
50°	8040	8429	8209
55°	7748	8111	7862
60°	7418	7726	7488
65°	6991	7259	6996
70°	6433	6692	6362
75°	5665	5921	5578
80°	4603	4803	4551
85°	3205	3416	3335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	685.0	3.6
10°-20°	1941.1	10.2
20°-30°	2895.0	15.1
30°-40°	3430.6	17.9
40°-50°	3471.3	18.2
50°-60°	3031.7	15.9
60°-70°	2215.4	11.6
70°-80°	1178.8	6.2
80°-90°	272.4	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°	5521.1	28.9
0°-40°	8951.7	46.8
0°-60°	15454.7	80.8
0°-90°	19121.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19121.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7273	7273	7273	7273	7273	
5°	7178	7192	7246	7262	7201	681
15°	6801	6846	6911	6952	6862	1917
25°	6158	6234	6337	6361	6264	2837
35°	5331	5414	5542	5581	5491	3334
45°	4356	4434	4576	4580	4490	3361
55°	3303	3370	3458	3408	3352	2953
65°	2196	2241	2280	2235	2198	2173
75°	1090	1115	1139	1097	1073	1159
85°	208	211	221	224	216	263
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7273.1	7273.1	7273.1	7273.1	7273.1
2.5°	7216.2	7239.7	7264.0	7274.6	7215.5
5°	7178.3	7192.0	7245.8	7262.5	7201.1
7.5°	7116.2	7136.7	7188.9	7196.5	7137.4
10°	7031.3	7067.7	7102.6	7140.5	7068.5
12.5°	6923.0	6972.2	7031.3	7038.2	6983.6
15°	6801.0	6846.4	6910.8	6952.5	6862.4
17.5°	6664.6	6708.5	6791.9	6799.5	6744.9
20°	6512.3	6566.8	6666.8	6684.3	6586.5
22.5°	6339.5	6413.0	6496.3	6513.0	6441.0
25°	6158.4	6234.2	6337.2	6360.7	6264.5
27.5°	5968.9	6041.7	6157.6	6174.3	6093.2
30°	5765.9	5834.1	5961.4	5989.4	5906.8
32.5°	5559.7	5627.9	5768.9	5792.4	5712.1
35°	5330.9	5414.3	5542.3	5581.0	5490.8
37.5°	5097.5	5178.6	5324.1	5358.9	5261.9
40°	4855.8	4936.1	5079.3	5108.1	5014.9
42.5°	4608.7	4689.1	4842.1	4846.7	4769.4
45°	4356.4	4433.7	4576.2	4580.0	4489.8
47.5°	4100.3	4178.3	4305.6	4291.2	4206.4
50°	3841.1	3915.4	4026.8	3998.0	3921.5
52.5°	3572.9	3644.9	3750.2	3703.2	3631.2
55°	3303.1	3369.8	3457.7	3407.7	3351.6
57.5°	3031.1	3098.5	3166.0	3115.2	3066.7
60°	2756.8	2815.9	2871.2	2819.7	2782.5
62.5°	2477.9	2528.7	2576.4	2527.2	2492.3
65°	2196.0	2240.7	2280.1	2234.7	2197.5
67.5°	1915.6	1953.5	1989.9	1942.9	1904.3
70°	1635.3	1667.8	1701.2	1652.7	1617.1
72.5°	1358.7	1387.5	1417.0	1370.0	1339.0
75°	1089.7	1114.7	1138.9	1097.2	1073.0
77.5°	832.8	854.0	870.7	844.2	820.7
80°	594.1	610.0	619.9	609.2	587.3
82.5°	381.9	393.3	398.6	397.8	383.4
85°	207.6	211.4	221.3	223.5	216.0
87.5°	80.3	85.6	87.9	94.7	87.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)