

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: P489720

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-27-120-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: P489720
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-LD4-5HI-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

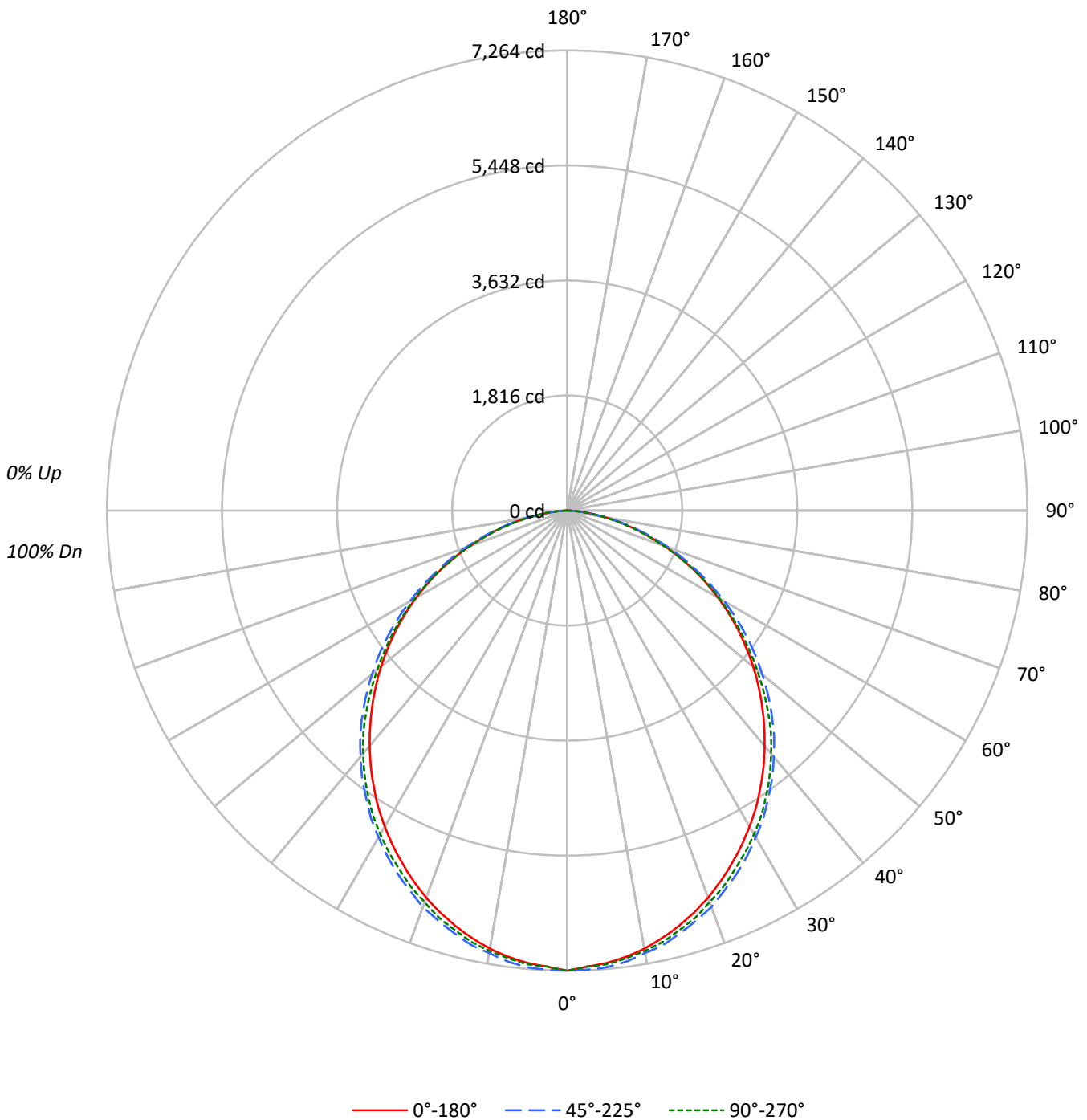
Lumens per Lamp: N/A
Luminaire Lumens: 19096.5 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 216
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°	9773	9773	9773
5°	9683	9774	9713
10°	9594	9691	9645
15°	9461	9614	9547
20°	9312	9533	9419
25°	9131	9396	9288
30°	8946	9250	9165
35°	8745	9092	9007
40°	8518	8910	8797
45°	8279	8696	8532
50°	8030	8418	8198
55°	7738	8100	7852
60°	7409	7716	7478
65°	6982	7250	6987
70°	6425	6684	6353
75°	5658	5913	5571
80°	4597	4797	4544
85°	3202	3412	3330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	684.1	3.6
10°-20°	1938.6	10.2
20°-30°	2891.3	15.1
30°-40°	3426.2	17.9
40°-50°	3466.8	18.2
50°-60°	3027.7	15.9
60°-70°	2212.5	11.6
70°-80°	1177.2	6.2
80°-90°	272.1	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°	5513.9	28.9
0°-40°	8940.1	46.8
0°-60°	15434.6	80.8
0°-90°	19096.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19096.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7264	7264	7264	7264	7264	
5°	7169	7183	7236	7253	7192	680
15°	6792	6838	6902	6944	6854	1915
25°	6150	6226	6329	6352	6256	2834
35°	5324	5407	5535	5574	5484	3329
45°	4351	4428	4570	4574	4484	3356
55°	3299	3365	3453	3403	3347	2949
65°	2193	2238	2277	2232	2195	2170
75°	1088	1113	1137	1096	1072	1157
85°	207	211	221	223	216	263
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7263.6	7263.6	7263.6	7263.6	7263.6
2.5°	7206.9	7230.3	7254.5	7265.1	7206.1
5°	7169.0	7182.7	7236.4	7253.0	7191.7
7.5°	7107.0	7127.4	7179.6	7187.2	7128.2
10°	7022.2	7058.5	7093.4	7131.2	7059.3
12.5°	6914.0	6963.2	7022.2	7029.0	6974.5
15°	6792.2	6837.6	6901.9	6943.5	6853.5
17.5°	6655.9	6699.8	6783.1	6790.6	6736.1
20°	6503.8	6558.3	6658.2	6675.6	6578.0
22.5°	6331.3	6404.7	6487.9	6504.6	6432.7
25°	6150.4	6226.1	6329.0	6352.5	6256.3
27.5°	5961.2	6033.9	6149.6	6166.3	6085.3
30°	5758.4	5826.5	5953.6	5981.6	5899.1
32.5°	5552.5	5620.6	5761.4	5784.9	5704.7
35°	5324.0	5407.2	5535.1	5573.7	5483.7
37.5°	5090.9	5171.9	5317.2	5352.0	5255.1
40°	4849.5	4929.7	5072.7	5101.5	5008.4
42.5°	4602.8	4683.0	4835.9	4840.4	4763.2
45°	4350.8	4428.0	4570.2	4574.0	4484.0
47.5°	4095.0	4172.9	4300.1	4285.7	4200.9
50°	3836.1	3910.3	4021.6	3992.8	3916.4
52.5°	3568.2	3640.1	3745.3	3698.4	3626.5
55°	3298.8	3365.4	3453.2	3403.3	3347.3
57.5°	3027.1	3094.5	3161.9	3111.1	3062.7
60°	2753.2	2812.2	2867.5	2816.0	2778.9
62.5°	2474.7	2525.4	2573.1	2523.9	2489.1
65°	2193.2	2237.8	2277.2	2231.8	2194.7
67.5°	1913.2	1951.0	1987.3	1940.4	1901.8
70°	1633.1	1665.7	1699.0	1650.5	1615.0
72.5°	1356.9	1385.7	1415.2	1368.3	1337.2
75°	1088.3	1113.2	1137.4	1095.8	1071.6
77.5°	831.7	852.9	869.5	843.1	819.6
80°	593.3	609.2	619.1	608.5	586.5
82.5°	381.4	392.8	398.1	397.3	382.9
85°	207.4	211.1	221.0	223.3	215.7
87.5°	80.2	85.5	87.8	94.6	87.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)