

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: P489721

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-27-120-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: P489721
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
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

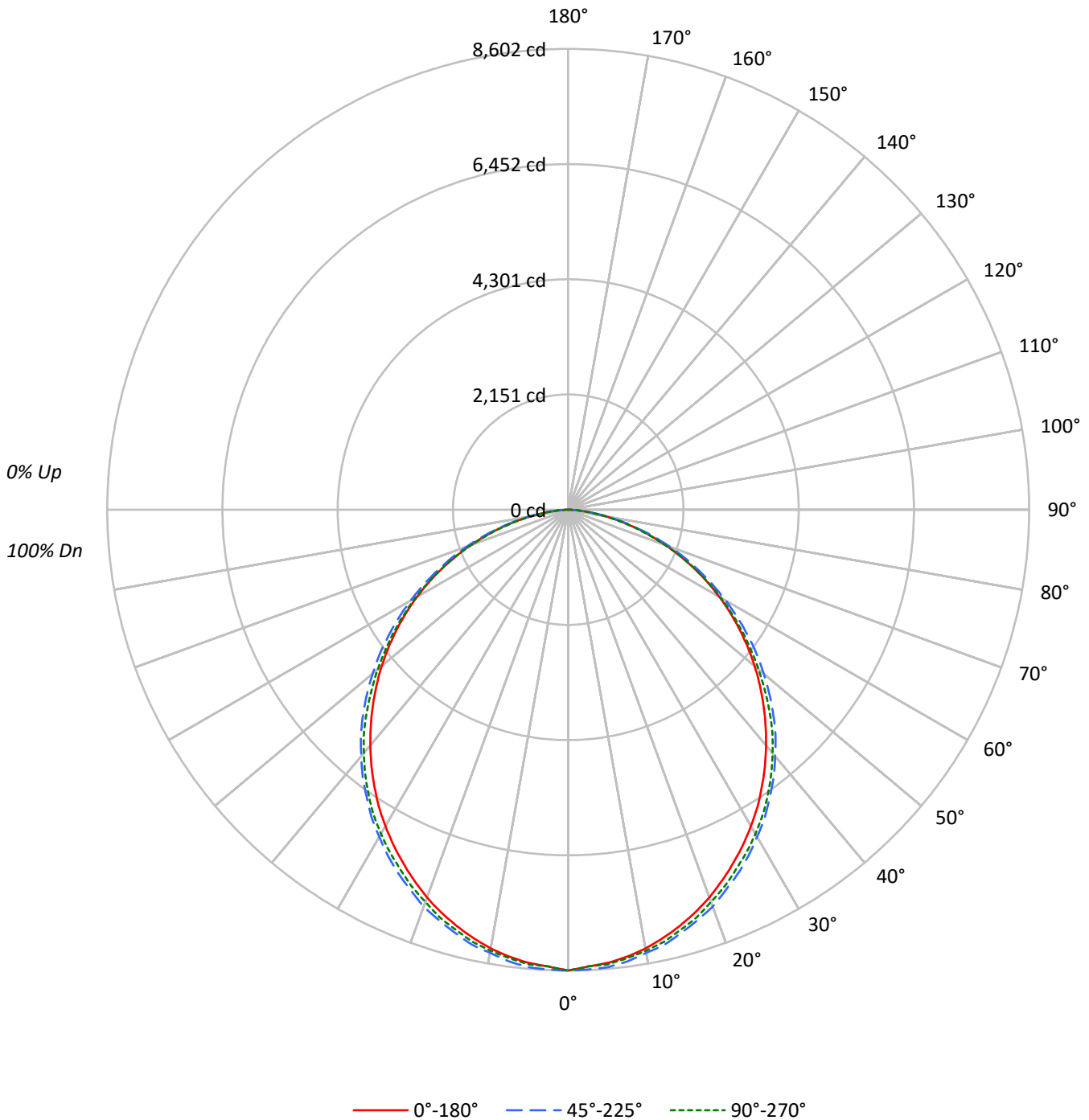
Lumens per Lamp: N/A
Luminaire Lumens: 22615.8 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	11574	11574	11574
5°	11467	11575	11503
10°	11362	11477	11422
15°	11205	11386	11306
20°	11029	11290	11154
25°	10814	11128	11000
30°	10595	10954	10854
35°	10356	10767	10667
40°	10087	10552	10418
45°	9804	10299	10104
50°	9510	9969	9709
55°	9165	9593	9299
60°	8774	9138	8856
65°	8269	8586	8275
70°	7609	7915	7524
75°	6700	7003	6598
80°	5445	5680	5382
85°	3792	4040	3943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	810.2	3.6
10°-20°	2295.8	10.2
20°-30°	3424.1	15.1
30°-40°	4057.6	17.9
40°-50°	4105.7	18.2
50°-60°	3585.7	15.9
60°-70°	2620.3	11.6
70°-80°	1394.2	6.2
80°-90°	322.2	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°	6530.1	28.9
0°-40°	10587.7	46.8
0°-60°	18279.1	80.8
0°-90°	22615.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22615.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8602	8602	8602	8602	8602	
5°	8490	8506	8570	8590	8517	805
15°	8044	8098	8174	8223	8116	2268
25°	7284	7374	7495	7523	7409	3356
35°	6305	6404	6555	6601	6494	3943
45°	5153	5244	5412	5417	5310	3975
55°	3907	3986	4090	4030	3964	3492
65°	2597	2650	2697	2643	2599	2570
75°	1289	1318	1347	1298	1269	1370
85°	246	250	262	264	255	311
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8602.2	8602.2	8602.2	8602.2	8602.2
2.5°	8535.0	8562.8	8591.5	8604.0	8534.1
5°	8490.2	8506.3	8570.0	8589.7	8517.1
7.5°	8416.7	8440.9	8502.8	8511.7	8441.8
10°	8316.3	8359.4	8400.6	8445.4	8360.3
12.5°	8188.2	8246.4	8316.3	8324.4	8259.9
15°	8043.9	8097.7	8173.8	8223.1	8116.5
17.5°	7882.6	7934.5	8033.1	8042.1	7977.6
20°	7702.4	7766.9	7885.2	7905.9	7790.2
22.5°	7498.1	7585.0	7683.6	7703.3	7618.2
25°	7283.9	7373.5	7495.4	7523.2	7409.3
27.5°	7059.8	7145.8	7283.0	7302.7	7206.8
30°	6819.6	6900.3	7050.8	7084.0	6986.3
32.5°	6575.8	6656.5	6823.2	6851.0	6756.0
35°	6305.1	6403.7	6555.2	6600.9	6494.3
37.5°	6029.1	6125.0	6297.1	6338.3	6223.6
40°	5743.2	5838.2	6007.6	6041.6	5931.4
42.5°	5451.0	5546.0	5727.1	5732.4	5641.0
45°	5152.6	5244.0	5412.5	5417.0	5310.3
47.5°	4849.6	4941.9	5092.5	5075.5	4975.1
50°	4543.1	4630.9	4762.7	4728.6	4638.1
52.5°	4225.8	4311.0	4435.6	4380.0	4294.8
55°	3906.8	3985.6	4089.6	4030.5	3964.1
57.5°	3585.0	3664.8	3744.5	3684.5	3627.1
60°	3260.6	3330.5	3395.9	3335.0	3291.0
62.5°	2930.8	2990.8	3047.3	2989.0	2947.8
65°	2597.3	2650.2	2696.8	2643.1	2599.1
67.5°	2265.7	2310.5	2353.6	2298.0	2252.3
70°	1934.1	1972.7	2012.1	1954.7	1912.6
72.5°	1607.0	1641.0	1676.0	1620.4	1583.7
75°	1288.8	1318.4	1347.1	1297.8	1269.1
77.5°	985.0	1010.1	1029.8	998.4	970.6
80°	702.7	721.5	733.1	720.6	694.6
82.5°	451.7	465.2	471.4	470.5	453.5
85°	245.6	250.1	261.7	264.4	255.4
87.5°	95.0	101.3	104.0	112.0	103.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)