

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: P489748

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-35-120-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: P489748
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-LD4-5STD-35-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

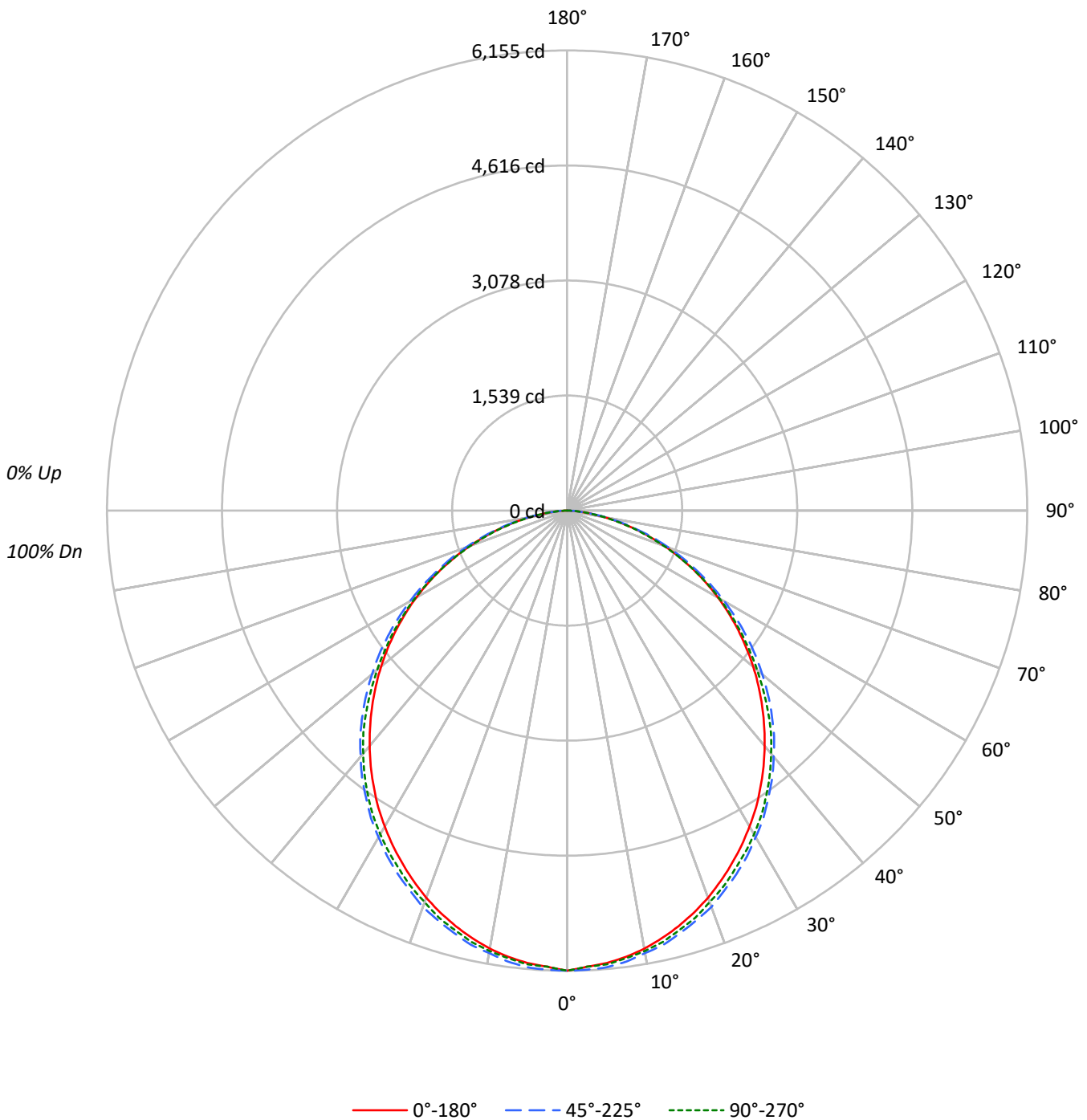
Lumens per Lamp: N/A
Luminaire Lumens: 16180.8 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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°	8281	8281	8281
5°	8204	8281	8230
10°	8129	8212	8172
15°	8017	8146	8089
20°	7891	8078	7981
25°	7737	7961	7870
30°	7581	7837	7766
35°	7410	7704	7632
40°	7217	7549	7454
45°	7015	7368	7229
50°	6804	7133	6946
55°	6557	6864	6653
60°	6278	6538	6336
65°	5916	6143	5920
70°	5444	5663	5383
75°	4794	5010	4720
80°	3895	4064	3851
85°	2712	2890	2822



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	579.6	3.6
10°-20°	1642.6	10.2
20°-30°	2449.8	15.1
30°-40°	2903.1	17.9
40°-50°	2937.5	18.2
50°-60°	2565.4	15.9
60°-70°	1874.7	11.6
70°-80°	997.5	6.2
80°-90°	230.6	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°	4672.0	28.9
0°-40°	7575.1	46.8
0°-60°	13078.0	80.8
0°-90°	16180.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16180.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6155	6155	6155	6155	6155	
5°	6074	6086	6132	6146	6094	576
15°	5755	5794	5848	5883	5807	1622
25°	5211	5276	5363	5383	5301	2401
35°	4511	4582	4690	4723	4646	2821
45°	3686	3752	3872	3876	3799	2844
55°	2795	2852	2926	2884	2836	2499
65°	1858	1896	1930	1891	1860	1839
75°	922	943	964	928	908	980
85°	176	179	187	189	183	223
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6154.6	6154.6	6154.6	6154.6	6154.6
2.5°	6106.5	6126.4	6146.9	6155.9	6105.9
5°	6074.4	6086.0	6131.5	6145.6	6093.7
7.5°	6021.9	6039.2	6083.4	6089.8	6039.8
10°	5950.0	5980.8	6010.3	6042.4	5981.5
12.5°	5858.3	5900.0	5950.0	5955.8	5909.6
15°	5755.1	5793.6	5848.1	5883.4	5807.0
17.5°	5639.7	5676.9	5747.4	5753.8	5707.7
20°	5510.8	5557.0	5641.6	5656.4	5573.6
22.5°	5364.6	5426.8	5497.3	5511.4	5450.5
25°	5211.3	5275.5	5362.7	5382.6	5301.1
27.5°	5051.0	5112.6	5210.7	5224.8	5156.2
30°	4879.2	4936.9	5044.6	5068.3	4998.4
32.5°	4704.8	4762.5	4881.7	4901.6	4833.7
35°	4511.1	4581.6	4690.0	4722.7	4646.4
37.5°	4313.6	4382.2	4505.3	4534.8	4452.8
40°	4109.1	4177.0	4298.2	4322.6	4243.7
42.5°	3900.0	3968.0	4097.5	4101.4	4036.0
45°	3686.5	3751.9	3872.4	3875.6	3799.3
47.5°	3469.7	3535.8	3643.5	3631.3	3559.5
50°	3250.4	3313.3	3407.5	3383.2	3318.4
52.5°	3023.4	3084.4	3173.5	3133.7	3072.8
55°	2795.2	2851.6	2926.0	2883.6	2836.2
57.5°	2565.0	2622.0	2679.1	2636.1	2595.1
60°	2332.8	2382.8	2429.7	2386.0	2354.6
62.5°	2096.8	2139.8	2180.2	2138.5	2109.0
65°	1858.3	1896.1	1929.5	1891.0	1859.6
67.5°	1621.0	1653.1	1683.9	1644.1	1611.4
70°	1383.8	1411.4	1439.6	1398.5	1368.4
72.5°	1149.7	1174.1	1199.1	1159.4	1133.1
75°	922.1	943.3	963.8	928.5	908.0
77.5°	704.7	722.7	736.8	714.3	694.5
80°	502.7	516.2	524.5	515.6	497.0
82.5°	323.2	332.8	337.3	336.6	324.5
85°	175.7	178.9	187.2	189.2	182.8
87.5°	68.0	72.5	74.4	80.2	73.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)