

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: P489688

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-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: P489688
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-35-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

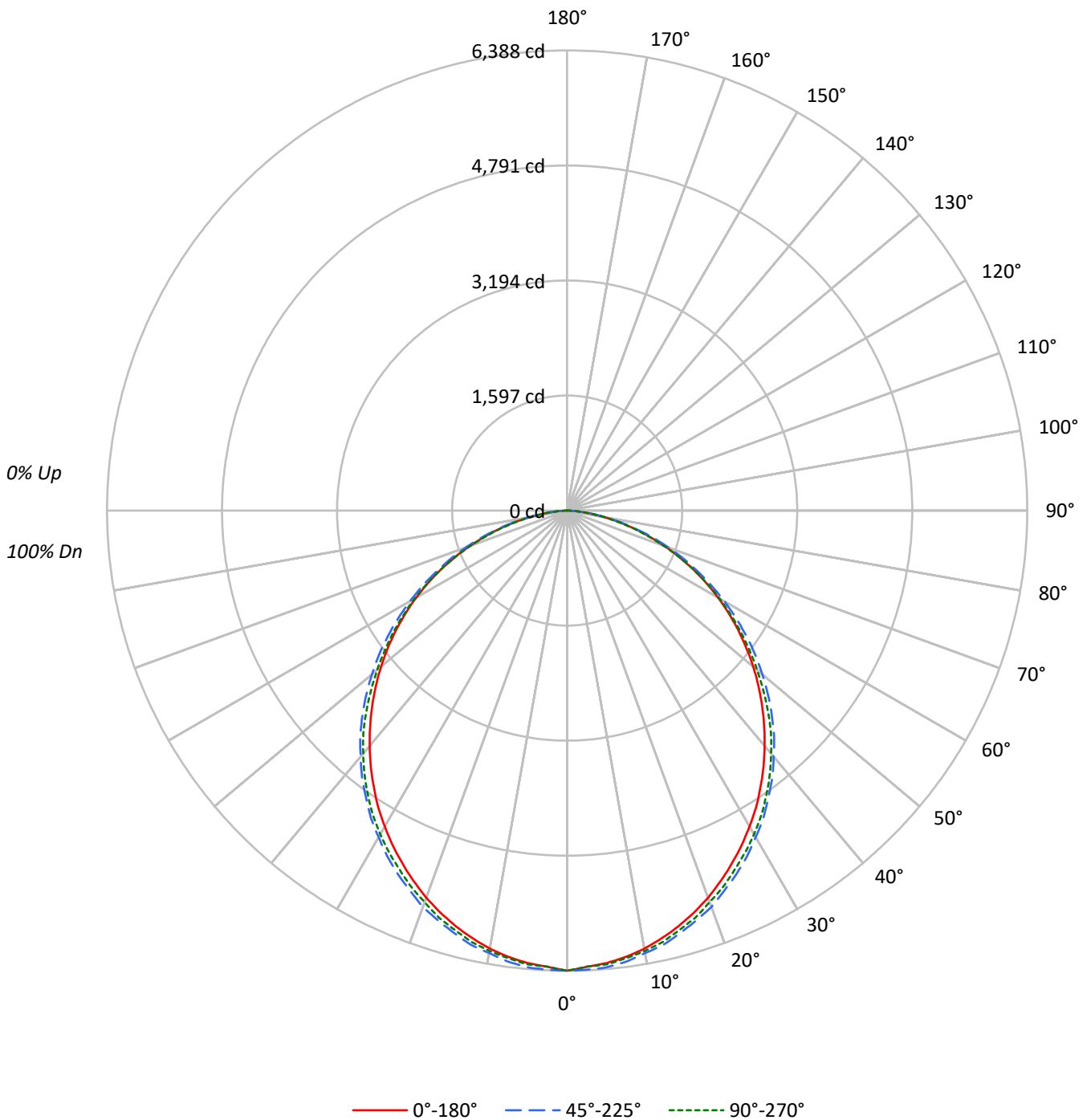
Lumens per Lamp: N/A
Luminaire Lumens: 16793.0 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8594	8594	8594
5°	8515	8595	8542
10°	8437	8522	8481
15°	8320	8454	8395
20°	8189	8384	8282
25°	8029	8263	8168
30°	7867	8134	8060
35°	7690	7995	7921
40°	7490	7835	7736
45°	7280	7647	7503
50°	7061	7403	7209
55°	6805	7123	6905
60°	6515	6786	6576
65°	6140	6375	6144
70°	5650	5877	5587
75°	4975	5200	4899
80°	4043	4218	3997
85°	2814	3000	2929



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	601.6	3.6
10°-20°	1704.7	10.2
20°-30°	2542.5	15.1
30°-40°	3012.9	17.9
40°-50°	3048.6	18.2
50°-60°	2662.5	15.9
60°-70°	1945.7	11.6
70°-80°	1035.2	6.2
80°-90°	239.3	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°	4848.8	28.9
0°-40°	7861.7	46.8
0°-60°	13572.9	80.8
0°-90°	16793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6388	6388	6388	6388	6388	
5°	6304	6316	6364	6378	6324	598
15°	5973	6013	6069	6106	6027	1684
25°	5408	5475	5566	5586	5502	2492
35°	4682	4755	4868	4901	4822	2928
45°	3826	3894	4019	4022	3943	2952
55°	2901	2960	3037	2993	2944	2593
65°	1929	1968	2002	1963	1930	1908
75°	957	979	1000	964	942	1017
85°	182	186	194	196	190	231
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6387.5	6387.5	6387.5	6387.5	6387.5
2.5°	6337.5	6358.2	6379.5	6388.8	6336.9
5°	6304.3	6316.3	6363.5	6378.1	6324.2
7.5°	6249.7	6267.7	6313.6	6320.2	6268.3
10°	6175.2	6207.1	6237.7	6271.0	6207.8
12.5°	6080.0	6123.3	6175.2	6181.2	6133.2
15°	5972.9	6012.8	6069.4	6106.0	6026.8
17.5°	5853.1	5891.7	5964.9	5971.5	5923.6
20°	5719.3	5767.2	5855.1	5870.4	5784.5
22.5°	5567.6	5632.1	5705.3	5720.0	5656.7
25°	5408.5	5475.1	5565.6	5586.2	5501.7
27.5°	5242.1	5306.0	5407.8	5422.5	5351.3
30°	5063.8	5123.7	5235.5	5260.1	5187.6
32.5°	4882.8	4942.7	5066.4	5087.1	5016.5
35°	4681.8	4755.0	4867.5	4901.4	4822.2
37.5°	4476.8	4548.0	4675.8	4706.4	4621.2
40°	4264.5	4335.1	4460.8	4486.1	4404.3
42.5°	4047.6	4118.1	4252.5	4256.5	4188.7
45°	3826.0	3893.8	4018.9	4022.3	3943.1
47.5°	3601.0	3669.6	3781.4	3768.7	3694.2
50°	3373.4	3438.6	3536.5	3511.2	3444.0
52.5°	3137.8	3201.1	3293.6	3252.3	3189.1
55°	2900.9	2959.5	3036.7	2992.7	2943.5
57.5°	2662.0	2721.2	2780.5	2735.9	2693.3
60°	2421.1	2473.0	2521.6	2476.3	2443.7
62.5°	2176.2	2220.8	2262.7	2219.4	2188.8
65°	1928.6	1967.9	2002.5	1962.6	1929.9
67.5°	1682.4	1715.7	1747.6	1706.3	1672.4
70°	1436.1	1464.8	1494.0	1451.5	1420.2
72.5°	1193.2	1218.5	1244.5	1203.2	1175.9
75°	957.0	978.9	1000.2	963.6	942.3
77.5°	731.4	750.0	764.7	741.4	720.7
80°	521.8	535.7	544.4	535.1	515.8
82.5°	335.4	345.4	350.1	349.4	336.7
85°	182.3	185.7	194.3	196.3	189.7
87.5°	70.5	75.2	77.2	83.2	76.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)