

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: P489686

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-30-120-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: P489686
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-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

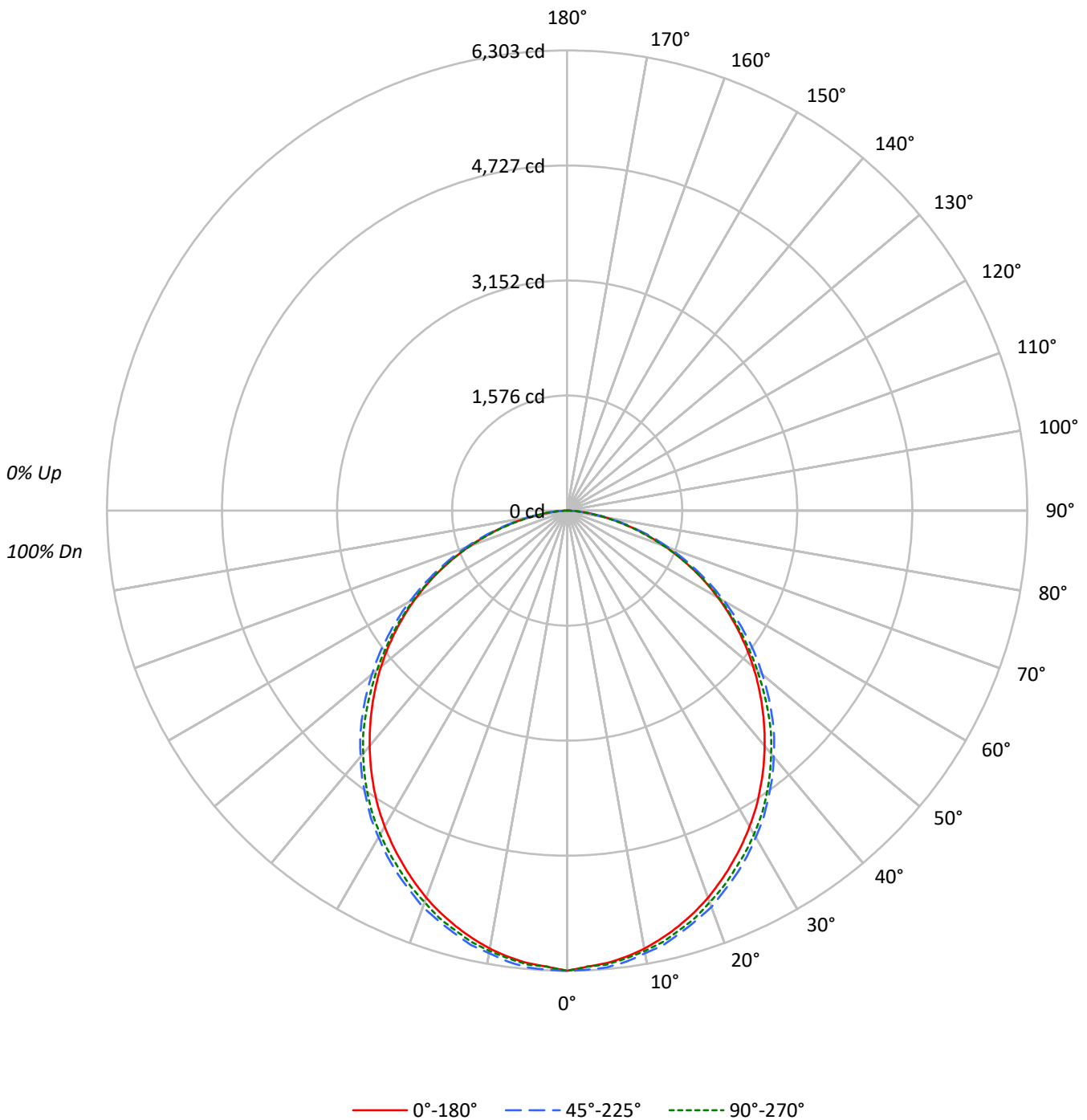
Lumens per Lamp: N/A
Luminaire Lumens: 16571.6 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	8481	8481	8481
5°	8403	8481	8429
10°	8326	8410	8369
15°	8210	8343	8284
20°	8081	8273	8173
25°	7924	8154	8060
30°	7764	8027	7953
35°	7589	7890	7816
40°	7392	7732	7634
45°	7184	7547	7404
50°	6968	7305	7114
55°	6715	7029	6814
60°	6429	6696	6489
65°	6059	6291	6063
70°	5575	5800	5513
75°	4910	5132	4834
80°	3990	4162	3944
85°	2777	2961	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	593.6	3.6
10°-20°	1682.3	10.2
20°-30°	2509.0	15.1
30°-40°	2973.2	17.9
40°-50°	3008.4	18.2
50°-60°	2627.4	15.9
60°-70°	1920.0	11.6
70°-80°	1021.6	6.2
80°-90°	236.1	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°	4784.9	28.9
0°-40°	7758.1	46.8
0°-60°	13393.9	80.8
0°-90°	16571.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16571.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6303	6303	6303	6303	6303	
5°	6221	6233	6280	6294	6241	590
15°	5894	5934	5989	6026	5947	1662
25°	5337	5403	5492	5512	5429	2459
35°	4620	4692	4803	4837	4759	2889
45°	3776	3842	3966	3969	3891	2913
55°	2863	2920	2997	2953	2905	2559
65°	1903	1942	1976	1937	1904	1883
75°	944	966	987	951	930	1004
85°	180	183	192	194	187	228
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6303.2	6303.2	6303.2	6303.2	6303.2
2.5°	6254.0	6274.4	6295.4	6304.6	6253.3
5°	6221.2	6233.0	6279.6	6294.1	6240.9
7.5°	6167.3	6185.0	6230.4	6236.9	6185.7
10°	6093.8	6125.3	6155.5	6188.3	6125.9
12.5°	5999.8	6042.5	6093.8	6099.7	6052.4
15°	5894.1	5933.5	5989.3	6025.5	5947.3
17.5°	5775.9	5814.0	5886.2	5892.8	5845.5
20°	5643.9	5691.2	5777.9	5793.0	5708.3
22.5°	5494.2	5557.9	5630.1	5644.6	5582.2
25°	5337.2	5402.9	5492.2	5512.5	5429.1
27.5°	5173.0	5236.1	5336.5	5351.0	5280.7
30°	4997.0	5056.1	5166.5	5190.8	5119.2
32.5°	4818.4	4877.5	4999.6	5020.0	4950.4
35°	4620.1	4692.3	4803.3	4836.8	4758.6
37.5°	4417.8	4488.1	4614.2	4644.4	4560.3
40°	4208.3	4277.9	4402.0	4427.0	4346.2
42.5°	3994.2	4063.8	4196.5	4200.4	4133.4
45°	3775.5	3842.5	3966.0	3969.2	3891.1
47.5°	3553.5	3621.2	3731.5	3719.0	3645.5
50°	3328.9	3393.3	3489.8	3464.9	3398.6
52.5°	3096.5	3158.8	3250.1	3209.4	3147.0
55°	2862.7	2920.5	2996.6	2953.3	2904.7
57.5°	2626.9	2685.3	2743.8	2699.8	2657.8
60°	2389.2	2440.4	2488.3	2443.7	2411.5
62.5°	2147.5	2191.5	2232.9	2190.2	2160.0
65°	1903.2	1941.9	1976.1	1936.7	1904.5
67.5°	1660.2	1693.0	1724.6	1683.8	1650.4
70°	1417.2	1445.5	1474.3	1432.3	1401.5
72.5°	1177.5	1202.5	1228.1	1187.4	1160.4
75°	944.4	966.0	987.1	950.9	929.9
77.5°	721.7	740.1	754.6	731.6	711.2
80°	514.9	528.7	537.2	528.0	509.0
82.5°	331.0	340.8	345.4	344.8	332.3
85°	179.9	183.2	191.8	193.7	187.2
87.5°	69.6	74.2	76.2	82.1	75.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)