

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: P489732

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489732
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-LD4-5LO-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

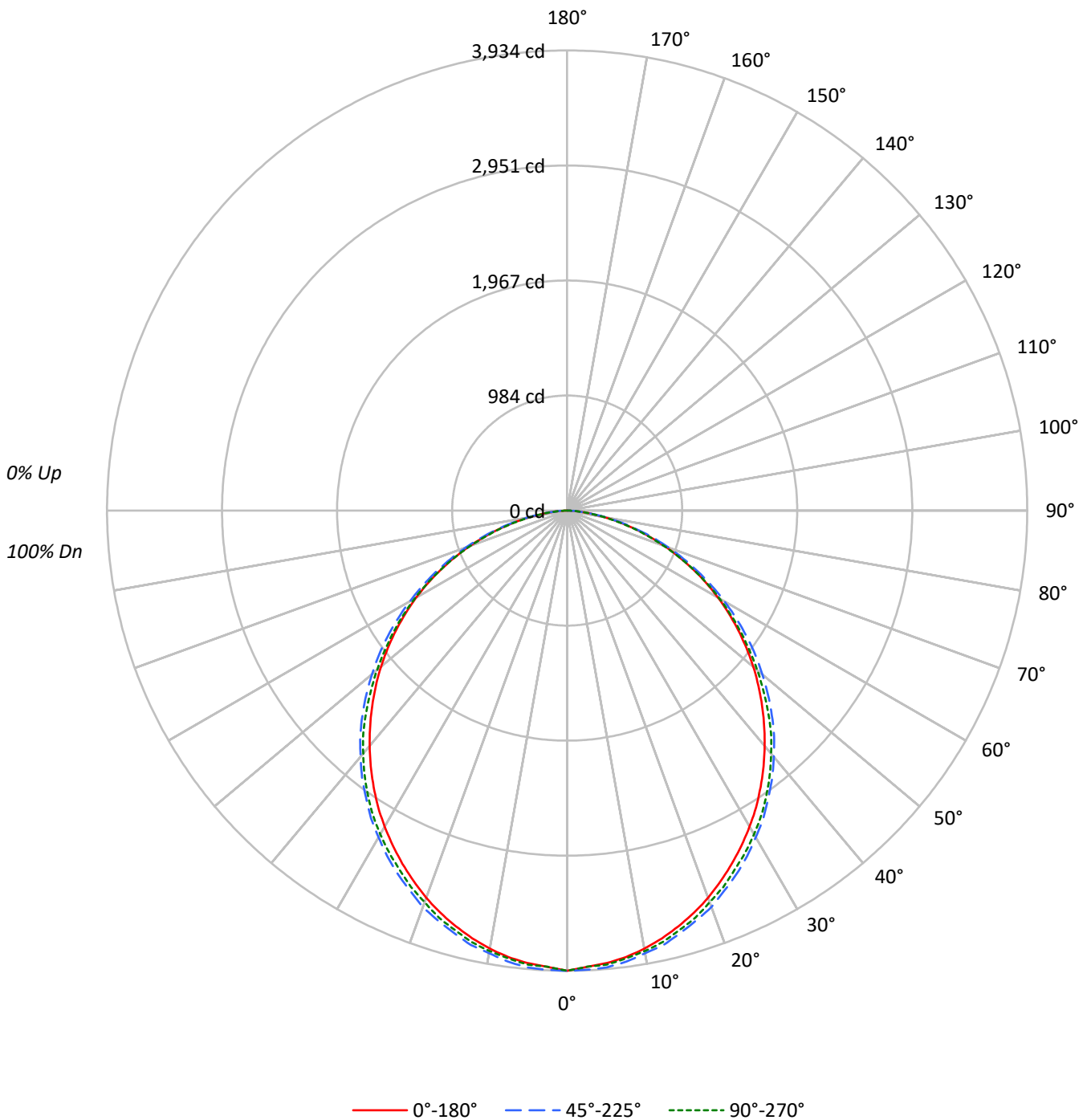
Lumens per Lamp: N/A
Luminaire Lumens: 10343.9 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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°	5294	5294	5294
5°	5245	5294	5261
10°	5197	5249	5224
15°	5125	5208	5171
20°	5044	5164	5102
25°	4946	5089	5031
30°	4846	5010	4964
35°	4737	4925	4879
40°	4614	4826	4765
45°	4484	4710	4622
50°	4349	4560	4441
55°	4192	4388	4253
60°	4013	4180	4050
65°	3782	3927	3785
70°	3480	3620	3441
75°	3065	3203	3018
80°	2490	2598	2462
85°	1734	1848	1803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.5	3.6
10°-20°	1050.1	10.2
20°-30°	1566.1	15.1
30°-40°	1855.8	17.9
40°-50°	1877.8	18.2
50°-60°	1640.0	15.9
60°-70°	1198.4	11.6
70°-80°	637.7	6.2
80°-90°	147.4	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°	2986.7	28.9
0°-40°	4842.5	46.8
0°-60°	8360.4	80.8
0°-90°	10343.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10343.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3934	3934	3934	3934	3934	
5°	3883	3891	3920	3929	3896	368
15°	3679	3704	3738	3761	3712	1037
25°	3332	3372	3428	3441	3389	1535
35°	2884	2929	2998	3019	2970	1803
45°	2357	2398	2476	2478	2429	1818
55°	1787	1823	1870	1843	1813	1597
65°	1188	1212	1234	1209	1189	1176
75°	590	603	616	594	580	627
85°	112	114	120	121	117	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3934.5	3934.5	3934.5	3934.5	3934.5
2.5°	3903.7	3916.4	3929.5	3935.3	3903.3
5°	3883.2	3890.6	3919.7	3928.7	3895.5
7.5°	3849.6	3860.7	3888.9	3893.0	3861.1
10°	3803.7	3823.4	3842.2	3862.7	3823.8
12.5°	3745.1	3771.7	3803.7	3807.4	3777.9
15°	3679.1	3703.7	3738.5	3761.1	3712.3
17.5°	3605.3	3629.1	3674.1	3678.2	3648.7
20°	3522.9	3552.4	3606.5	3615.9	3563.1
22.5°	3429.4	3469.2	3514.3	3523.3	3484.4
25°	3331.5	3372.4	3428.2	3440.9	3388.8
27.5°	3229.0	3268.3	3331.0	3340.1	3296.2
30°	3119.1	3156.0	3224.9	3240.0	3195.4
32.5°	3007.6	3044.5	3120.8	3133.5	3090.0
35°	2883.8	2928.9	2998.2	3019.1	2970.3
37.5°	2757.6	2801.4	2880.1	2899.0	2846.5
40°	2626.8	2670.2	2747.7	2763.3	2712.9
42.5°	2493.2	2536.6	2619.4	2621.9	2580.1
45°	2356.7	2398.5	2475.5	2477.6	2428.8
47.5°	2218.1	2260.3	2329.2	2321.4	2275.5
50°	2077.9	2118.1	2178.3	2162.8	2121.4
52.5°	1932.8	1971.7	2028.7	2003.3	1964.4
55°	1786.9	1822.9	1870.5	1843.4	1813.1
57.5°	1639.7	1676.2	1712.7	1685.2	1659.0
60°	1491.3	1523.3	1553.2	1525.3	1505.2
62.5°	1340.5	1367.9	1393.7	1367.1	1348.2
65°	1188.0	1212.1	1233.5	1208.9	1188.8
67.5°	1036.3	1056.8	1076.5	1051.0	1030.1
70°	884.6	902.2	920.3	894.0	874.8
72.5°	735.0	750.6	766.6	741.1	724.3
75°	589.5	603.0	616.1	593.6	580.5
77.5°	450.5	462.0	471.0	456.7	443.9
80°	321.4	330.0	335.3	329.6	317.7
82.5°	206.6	212.8	215.6	215.2	207.4
85°	112.3	114.4	119.7	120.9	116.8
87.5°	43.5	46.3	47.6	51.2	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)