

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: P489704

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4LO-50-120-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: P489704
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-LD4-4LO-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

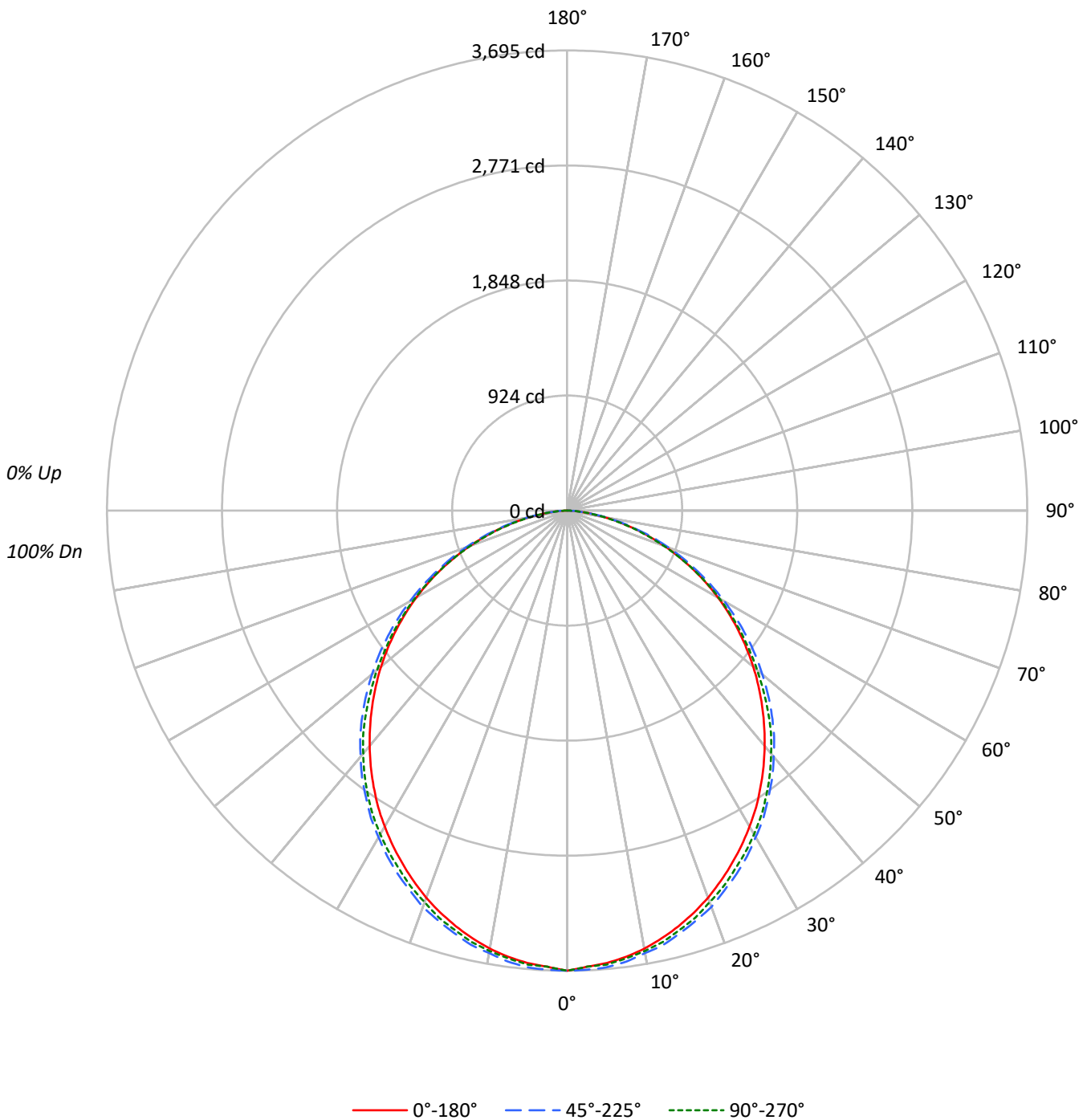
Lumens per Lamp: N/A
Luminaire Lumens: 9714.3 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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

TEST NUMBER: P489704

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4LO-50-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P489704

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4LO-50-120-EDD-90

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°	4972	4972	4972
5°	4926	4972	4941
10°	4881	4930	4906
15°	4813	4891	4856
20°	4737	4850	4791
25°	4645	4780	4725
30°	4551	4705	4662
35°	4448	4625	4582
40°	4333	4532	4475
45°	4211	4424	4340
50°	4085	4282	4170
55°	3936	4121	3994
60°	3769	3925	3804
65°	3552	3688	3554
70°	3268	3400	3232
75°	2878	3008	2834
80°	2338	2440	2312
85°	1629	1735	1694



TEST NUMBER: P489704

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4LO-50-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.0	3.6
10°-20°	986.1	10.2
20°-30°	1470.8	15.1
30°-40°	1742.9	17.9
40°-50°	1763.5	18.2
50°-60°	1540.2	15.9
60°-70°	1125.5	11.6
70°-80°	598.9	6.2
80°-90°	138.4	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°	2804.9	28.9
0°-40°	4547.8	46.8
0°-60°	7851.5	80.8
0°-90°	9714.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9714.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3695	3695	3695	3695	3695	
5°	3647	3654	3681	3690	3658	346
15°	3455	3478	3511	3532	3486	974
25°	3129	3167	3220	3232	3183	1441
35°	2708	2751	2816	2835	2790	1694
45°	2213	2252	2325	2327	2281	1707
55°	1678	1712	1757	1731	1703	1500
65°	1116	1138	1158	1135	1116	1104
75°	554	566	579	557	545	589
85°	106	107	112	114	110	134
90°	0	0	0	0	0	



TEST NUMBER: P489704

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4LO-50-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3695.0	3695.0	3695.0	3695.0	3695.0
2.5°	3666.1	3678.0	3690.4	3695.7	3665.7
5°	3646.9	3653.8	3681.1	3689.6	3658.4
7.5°	3615.3	3625.7	3652.2	3656.1	3626.1
10°	3572.2	3590.6	3608.4	3627.6	3591.0
12.5°	3517.1	3542.1	3572.2	3575.6	3547.9
15°	3455.1	3478.2	3511.0	3532.1	3486.3
17.5°	3385.8	3408.2	3450.5	3454.4	3426.6
20°	3308.5	3336.2	3387.0	3395.8	3346.2
22.5°	3220.7	3258.0	3300.4	3308.8	3272.3
25°	3128.7	3167.2	3219.5	3231.5	3182.6
27.5°	3032.4	3069.4	3128.3	3136.8	3095.6
30°	2929.3	2963.9	3028.6	3042.8	3000.9
32.5°	2824.5	2859.2	2930.8	2942.7	2901.9
35°	2708.3	2750.6	2815.7	2835.3	2789.5
37.5°	2589.7	2630.9	2704.8	2722.5	2673.3
40°	2466.9	2507.7	2580.5	2595.1	2547.8
42.5°	2341.4	2382.2	2460.0	2462.3	2423.0
45°	2213.2	2252.5	2324.9	2326.8	2281.0
47.5°	2083.1	2122.7	2187.4	2180.1	2137.0
50°	1951.4	1989.2	2045.7	2031.1	1992.2
52.5°	1815.1	1851.7	1905.2	1881.4	1844.8
55°	1678.1	1712.0	1756.6	1731.2	1702.7
57.5°	1539.9	1574.2	1608.4	1582.6	1558.0
60°	1400.5	1430.6	1458.7	1432.5	1413.6
62.5°	1258.9	1284.7	1308.9	1283.9	1266.2
65°	1115.7	1138.4	1158.4	1135.3	1116.4
67.5°	973.2	992.5	1010.9	987.1	967.4
70°	830.8	847.3	864.3	839.6	821.5
72.5°	690.3	704.9	719.9	696.0	680.2
75°	553.6	566.3	578.6	557.4	545.1
77.5°	423.1	433.9	442.3	428.9	416.9
80°	301.8	309.9	314.9	309.5	298.4
82.5°	194.0	199.8	202.5	202.1	194.8
85°	105.5	107.4	112.4	113.6	109.7
87.5°	40.8	43.5	44.7	48.1	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)