

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: P489740

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489740
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-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

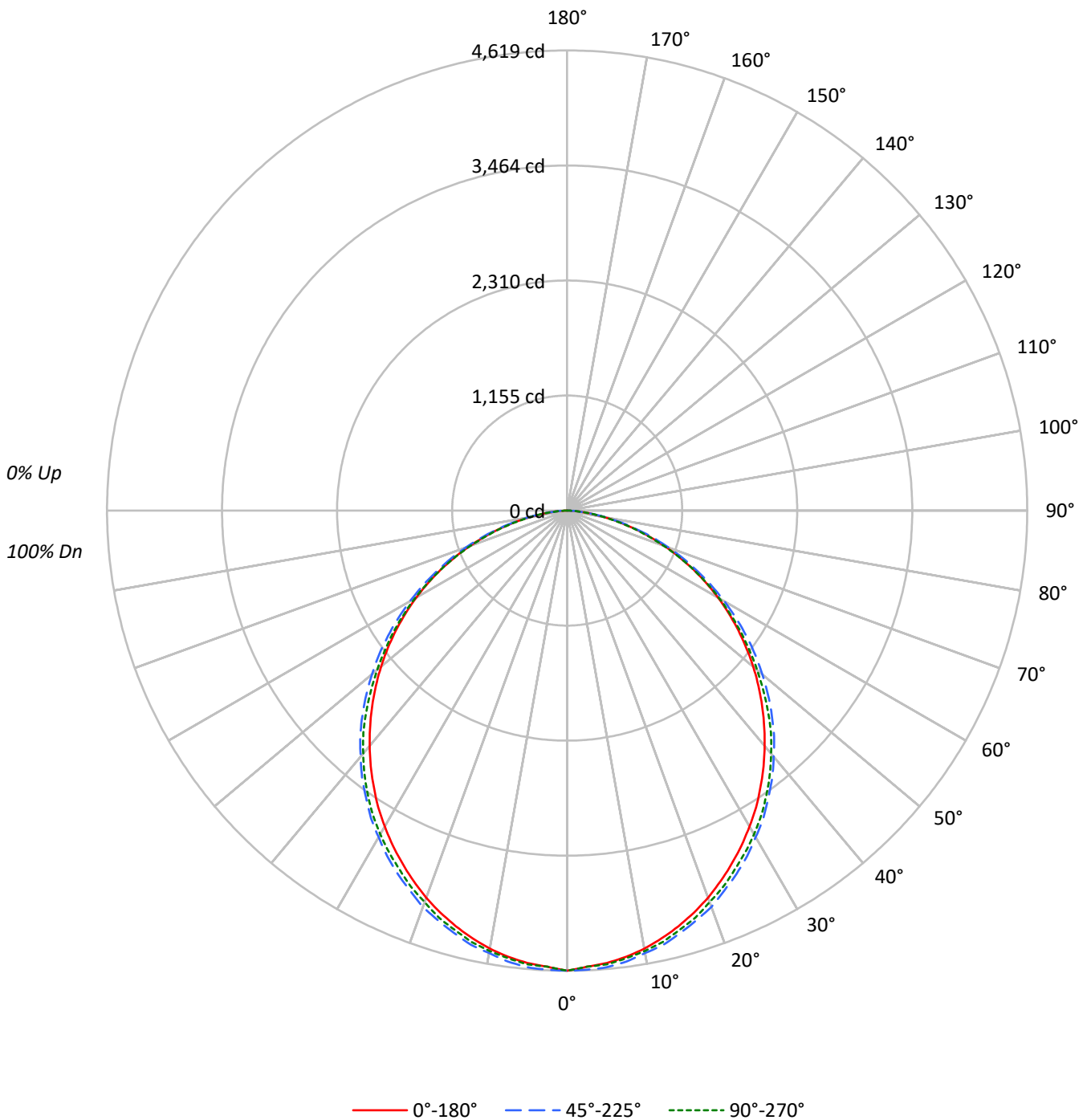
Lumens per Lamp: N/A
Luminaire Lumens: 12142.9 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6214	6214	6214
5°	6157	6215	6176
10°	6101	6162	6133
15°	6016	6113	6070
20°	5922	6062	5989
25°	5806	5975	5906
30°	5689	5882	5828
35°	5561	5781	5727
40°	5416	5665	5594
45°	5264	5530	5425
50°	5106	5353	5213
55°	4921	5151	4993
60°	4711	4906	4755
65°	4440	4610	4443
70°	4085	4250	4040
75°	3597	3760	3542
80°	2923	3050	2889
85°	2036	2169	2117



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	435.0	3.6
10°-20°	1232.7	10.2
20°-30°	1838.5	15.1
30°-40°	2178.6	17.9
40°-50°	2204.4	18.2
50°-60°	1925.2	15.9
60°-70°	1406.9	11.6
70°-80°	748.6	6.2
80°-90°	173.0	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°	3506.1	28.9
0°-40°	5684.8	46.8
0°-60°	9814.4	80.8
0°-90°	12142.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12142.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4619	4619	4619	4619	4619	
5°	4559	4567	4601	4612	4573	432
15°	4319	4348	4389	4415	4358	1218
25°	3911	3959	4024	4039	3978	1802
35°	3385	3438	3520	3544	3487	2117
45°	2766	2816	2906	2908	2851	2134
55°	2098	2140	2196	2164	2128	1875
65°	1395	1423	1448	1419	1396	1380
75°	692	708	723	697	681	736
85°	132	134	140	142	137	167
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4618.7	4618.7	4618.7	4618.7	4618.7
2.5°	4582.6	4597.6	4613.0	4619.7	4582.2
5°	4558.6	4567.2	4601.4	4612.0	4573.0
7.5°	4519.1	4532.1	4565.3	4570.1	4532.6
10°	4465.2	4488.3	4510.5	4534.5	4488.8
12.5°	4396.4	4427.7	4465.2	4469.5	4434.9
15°	4318.9	4347.8	4388.7	4415.2	4357.9
17.5°	4232.3	4260.2	4313.2	4318.0	4283.3
20°	4135.6	4170.2	4233.8	4244.8	4182.7
22.5°	4025.9	4072.5	4125.5	4136.1	4090.4
25°	3910.9	3959.0	4024.4	4039.3	3978.2
27.5°	3790.6	3836.7	3910.4	3921.0	3869.5
30°	3661.6	3704.9	3785.7	3803.5	3751.1
32.5°	3530.7	3574.0	3663.5	3678.4	3627.4
35°	3385.4	3438.3	3519.6	3544.2	3486.9
37.5°	3237.2	3288.6	3381.0	3403.2	3341.6
40°	3083.6	3134.7	3225.6	3243.9	3184.7
42.5°	2926.8	2977.8	3075.0	3077.9	3028.8
45°	2766.5	2815.6	2906.1	2908.5	2851.2
47.5°	2603.9	2653.4	2734.3	2725.1	2671.2
50°	2439.3	2486.5	2557.2	2538.9	2490.3
52.5°	2268.9	2314.7	2381.5	2351.7	2306.0
55°	2097.6	2140.0	2195.8	2164.0	2128.4
57.5°	1924.9	1967.7	2010.5	1978.3	1947.5
60°	1750.7	1788.2	1823.3	1790.6	1767.0
62.5°	1573.6	1605.8	1636.1	1604.9	1582.7
65°	1394.6	1423.0	1448.0	1419.1	1395.5
67.5°	1216.5	1240.6	1263.7	1233.8	1209.3
70°	1038.5	1059.2	1080.3	1049.5	1026.9
72.5°	862.8	881.1	899.9	870.0	850.3
75°	692.0	707.9	723.3	696.8	681.4
77.5°	528.9	542.3	552.9	536.1	521.2
80°	377.3	387.4	393.6	386.9	372.9
82.5°	242.5	249.8	253.1	252.6	243.5
85°	131.9	134.3	140.5	142.0	137.1
87.5°	51.0	54.4	55.8	60.2	55.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)