

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: P489689

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-35-120-EDD**

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: P489689
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
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

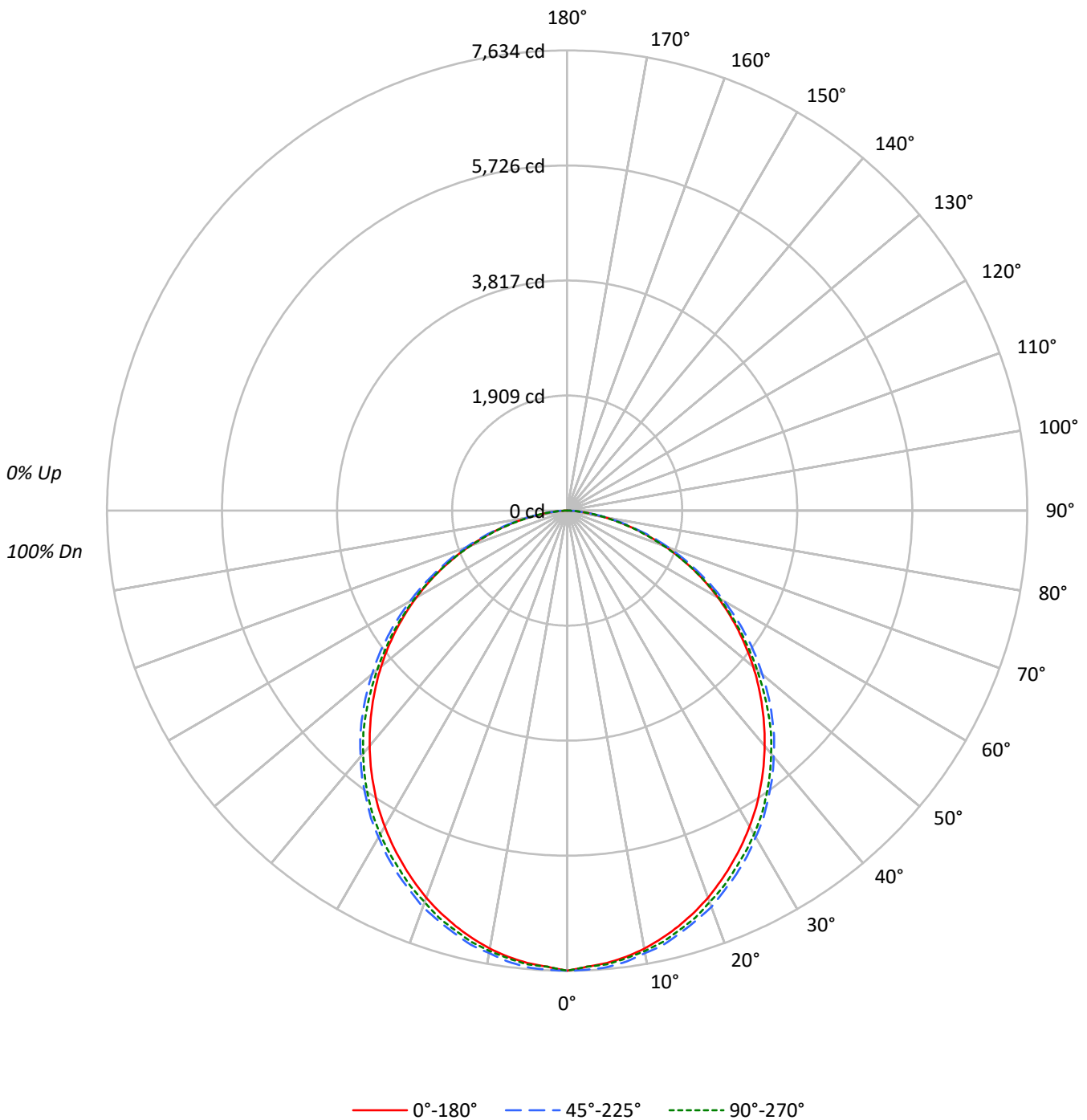
Lumens per Lamp: N/A
Luminaire Lumens: 20069.3 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P489689

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4HI-35-120-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P489689

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4HI-35-120-EDD

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°	10271	10271	10271
5°	10176	10272	10208
10°	10083	10185	10136
15°	9943	10104	10033
20°	9787	10019	9898
25°	9596	9875	9761
30°	9402	9721	9632
35°	9190	9555	9466
40°	8952	9364	9245
45°	8700	9139	8967
50°	8439	8847	8615
55°	8133	8513	8252
60°	7786	8109	7859
65°	7338	7619	7343
70°	6752	7024	6677
75°	5946	6214	5855
80°	4831	5041	4776
85°	3364	3585	3500



TEST NUMBER: P489689

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4HI-35-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	718.9	3.6
10°-20°	2037.3	10.2
20°-30°	3038.6	15.1
30°-40°	3600.7	17.9
40°-50°	3643.4	18.2
50°-60°	3182.0	15.9
60°-70°	2325.2	11.6
70°-80°	1237.2	6.2
80°-90°	286.0	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°	5794.8	28.9
0°-40°	9395.5	46.8
0°-60°	16220.9	80.8
0°-90°	20069.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20069.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7634	7634	7634	7634	7634	
5°	7534	7548	7605	7622	7558	714
15°	7138	7186	7254	7297	7203	2012
25°	6464	6543	6651	6676	6575	2978
35°	5595	5683	5817	5858	5763	3499
45°	4572	4654	4803	4807	4712	3527
55°	3467	3537	3629	3577	3518	3099
65°	2305	2352	2393	2345	2306	2281
75°	1144	1170	1195	1152	1126	1216
85°	218	222	232	235	227	276
90°	0	0	0	0	0	



TEST NUMBER: P489689

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-4HI-35-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7633.6	7633.6	7633.6	7633.6	7633.6
2.5°	7574.0	7598.7	7624.1	7635.2	7573.2
5°	7534.2	7548.5	7605.0	7622.5	7558.1
7.5°	7469.0	7490.5	7545.4	7553.3	7491.3
10°	7379.9	7418.1	7454.7	7494.5	7418.9
12.5°	7266.2	7317.9	7379.9	7387.1	7329.8
15°	7138.2	7185.9	7253.5	7297.2	7202.6
17.5°	6995.0	7041.1	7128.6	7136.6	7079.3
20°	6835.1	6892.4	6997.4	7015.7	6913.1
22.5°	6653.8	6730.9	6818.4	6835.9	6760.4
25°	6463.7	6543.2	6651.4	6676.1	6575.1
27.5°	6264.9	6341.2	6462.9	6480.4	6395.3
30°	6051.7	6123.3	6256.9	6286.3	6199.7
32.5°	5835.4	5907.0	6054.9	6079.6	5995.3
35°	5595.2	5682.7	5817.1	5857.7	5763.0
37.5°	5350.2	5435.3	5588.0	5624.6	5522.8
40°	5096.5	5180.8	5331.1	5361.4	5263.5
42.5°	4837.2	4921.5	5082.2	5087.0	5005.9
45°	4572.4	4653.5	4803.0	4807.0	4712.4
47.5°	4303.6	4385.5	4519.1	4504.0	4414.9
50°	4031.6	4109.5	4226.4	4196.2	4115.9
52.5°	3750.0	3825.6	3936.1	3886.8	3811.3
55°	3466.9	3536.9	3629.1	3576.6	3517.8
57.5°	3181.3	3252.1	3322.9	3269.6	3218.7
60°	2893.4	2955.5	3013.5	2959.5	2920.5
62.5°	2600.8	2654.0	2704.1	2652.4	2615.9
65°	2304.9	2351.8	2393.2	2345.4	2306.5
67.5°	2010.6	2050.4	2088.6	2039.2	1998.7
70°	1716.3	1750.5	1785.5	1734.6	1697.2
72.5°	1426.0	1456.3	1487.3	1438.0	1405.4
75°	1143.7	1169.9	1195.4	1151.6	1126.2
77.5°	874.1	896.3	913.8	886.0	861.4
80°	623.5	640.2	650.6	639.5	616.4
82.5°	400.9	412.8	418.3	417.6	402.4
85°	217.9	221.9	232.2	234.6	226.7
87.5°	84.3	89.9	92.3	99.4	91.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)