

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: P489035

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1HI-20-120-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: P489035
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-24-2-INS-A19156-LD4-1HI-20-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

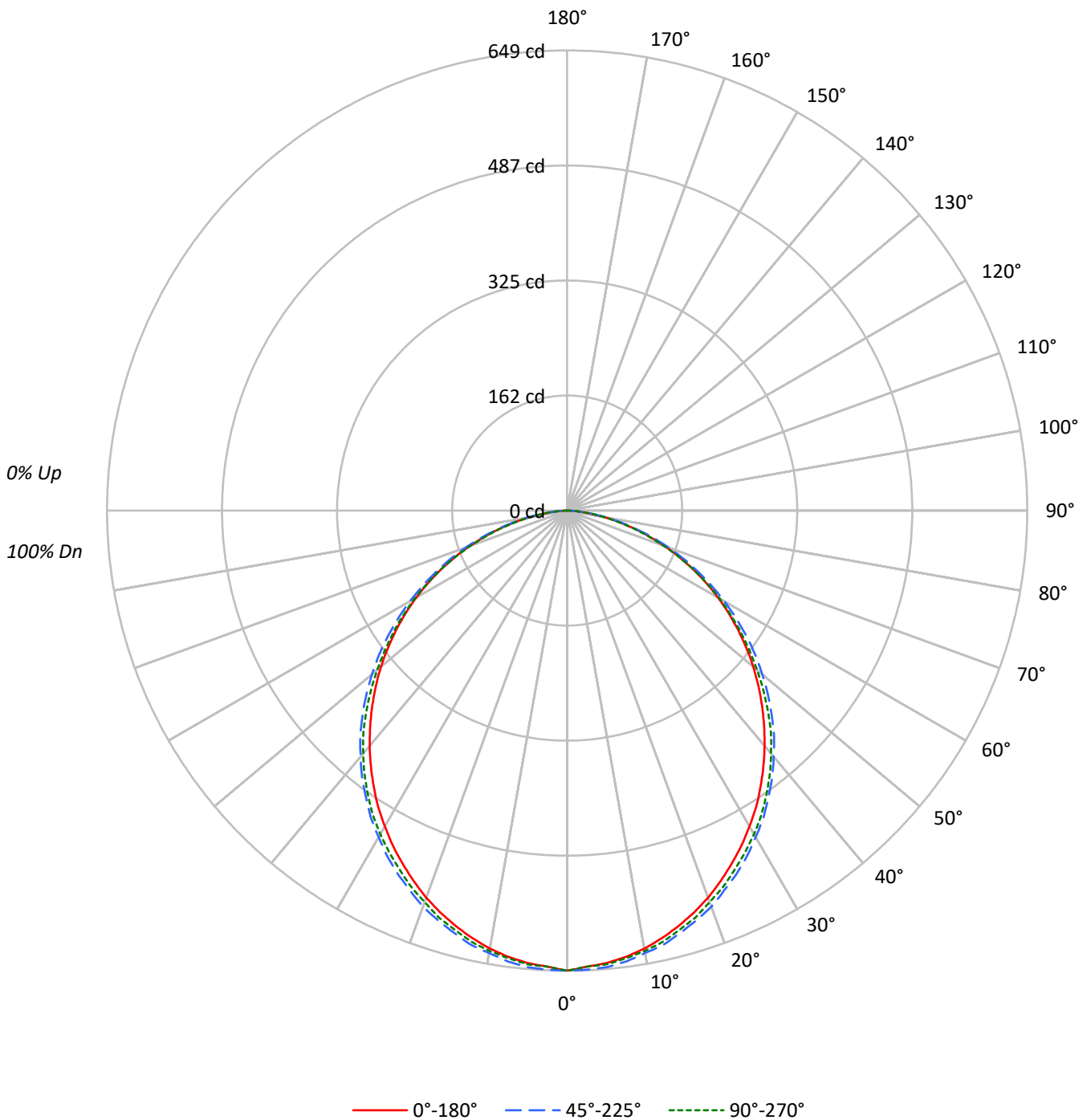
Lumens per Lamp: N/A
Luminaire Lumens: 1705.8 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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

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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°	1746	1746	1746
5°	1730	1746	1735
10°	1714	1731	1723
15°	1690	1718	1706
20°	1664	1703	1683
25°	1631	1678	1659
30°	1598	1652	1637
35°	1562	1624	1609
40°	1522	1592	1572
45°	1479	1553	1524
50°	1435	1504	1464
55°	1383	1447	1403
60°	1323	1378	1336
65°	1247	1295	1248
70°	1148	1194	1135
75°	1011	1056	995
80°	821	857	812
85°	571	608	596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	3.6
10°-20°	173.2	10.2
20°-30°	258.3	15.1
30°-40°	306.0	17.9
40°-50°	309.7	18.2
50°-60°	270.5	15.9
60°-70°	197.6	11.6
70°-80°	105.2	6.2
80°-90°	24.3	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°	492.5	28.9
0°-40°	798.6	46.8
0°-60°	1378.7	80.8
0°-90°	1705.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1705.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	649	649	649	649	649	
5°	640	642	646	648	642	61
15°	607	611	616	620	612	171
25°	549	556	565	567	559	253
35°	476	483	494	498	490	297
45°	389	396	408	409	400	300
55°	295	301	308	304	299	263
65°	196	200	203	199	196	194
75°	97	99	102	98	96	103
85°	18	19	20	20	19	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	648.8	648.8	648.8	648.8	648.8
2.5°	643.8	645.9	648.0	649.0	643.7
5°	640.4	641.6	646.4	647.9	642.4
7.5°	634.8	636.7	641.3	642.0	636.7
10°	627.3	630.5	633.6	637.0	630.6
12.5°	617.6	622.0	627.3	627.9	623.0
15°	606.7	610.8	616.5	620.2	612.2
17.5°	594.5	598.5	605.9	606.6	601.7
20°	581.0	585.8	594.7	596.3	587.6
22.5°	565.5	572.1	579.5	581.0	574.6
25°	549.4	556.1	565.3	567.4	558.8
27.5°	532.5	539.0	549.3	550.8	543.6
30°	514.4	520.5	531.8	534.3	526.9
32.5°	496.0	502.1	514.6	516.7	509.6
35°	475.6	483.0	494.4	497.9	489.8
37.5°	454.7	462.0	475.0	478.1	469.4
40°	433.2	440.3	453.1	455.7	447.4
42.5°	411.1	418.3	432.0	432.4	425.5
45°	388.6	395.5	408.2	408.6	400.5
47.5°	365.8	372.7	384.1	382.8	375.2
50°	342.7	349.3	359.2	356.7	349.8
52.5°	318.7	325.2	334.6	330.4	323.9
55°	294.7	300.6	308.5	304.0	299.0
57.5°	270.4	276.4	282.4	277.9	273.6
60°	245.9	251.2	256.1	251.5	248.2
62.5°	221.1	225.6	229.8	225.4	222.3
65°	195.9	199.9	203.4	199.4	196.0
67.5°	170.9	174.3	177.5	173.3	169.9
70°	145.9	148.8	151.8	147.4	144.3
72.5°	121.2	123.8	126.4	122.2	119.4
75°	97.2	99.4	101.6	97.9	95.7
77.5°	74.3	76.2	77.7	75.3	73.2
80°	53.0	54.4	55.3	54.4	52.4
82.5°	34.1	35.1	35.6	35.5	34.2
85°	18.5	18.9	19.7	19.9	19.3
87.5°	7.2	7.6	7.8	8.5	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)