

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: P489083

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2LO-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: P489083
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-LD4-2LO-20-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

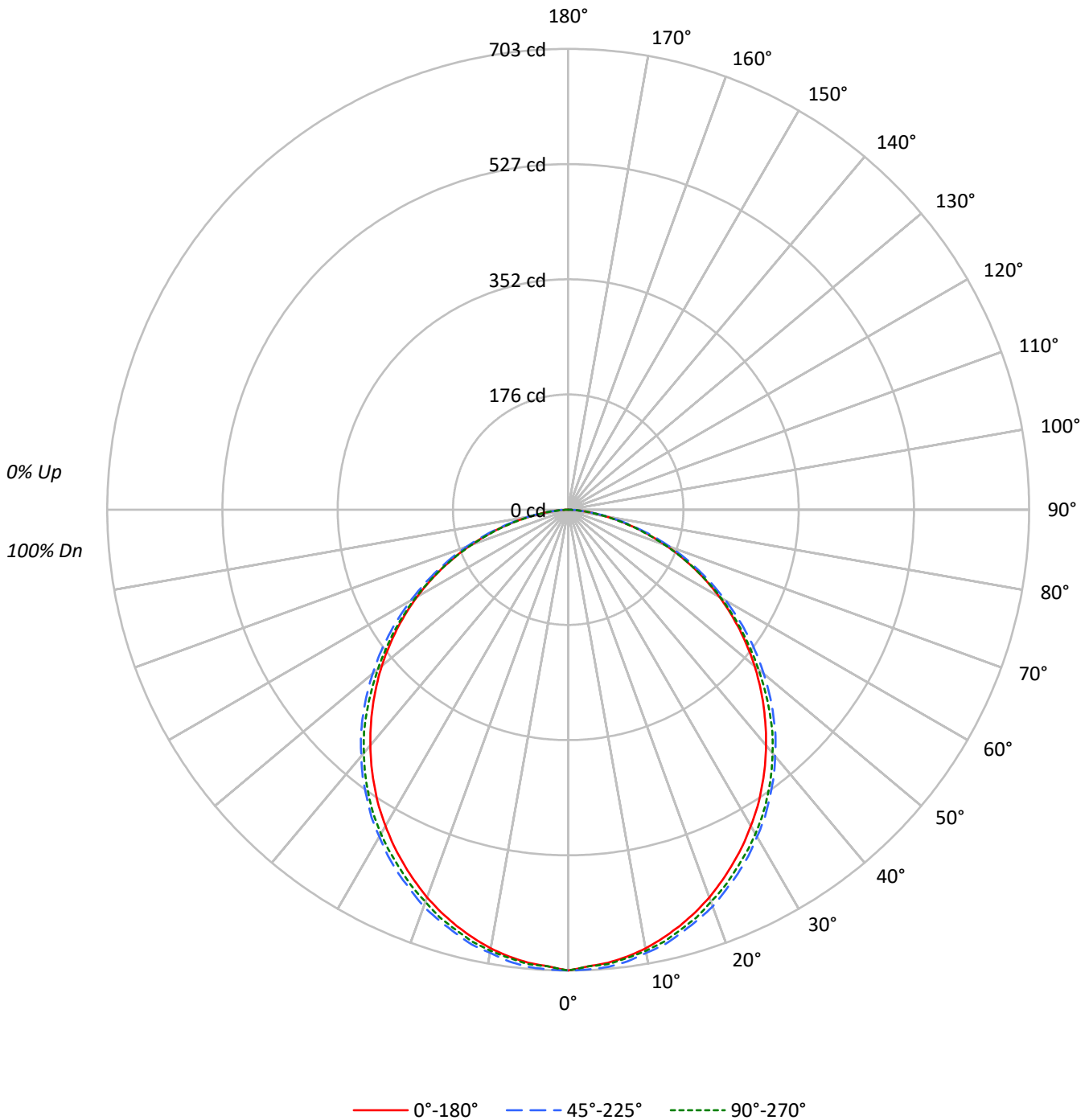
Lumens per Lamp: N/A
Luminaire Lumens: 1848.0 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1891	1891	1891
5°	1874	1892	1880
10°	1857	1876	1867
15°	1831	1861	1848
20°	1802	1845	1823
25°	1767	1819	1798
30°	1731	1790	1774
35°	1692	1759	1743
40°	1649	1724	1703
45°	1602	1683	1651
50°	1554	1629	1587
55°	1498	1568	1520
60°	1434	1493	1447
65°	1351	1403	1352
70°	1243	1293	1230
75°	1095	1145	1078
80°	890	928	880
85°	621	661	645



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	3.6
10°-20°	187.6	10.2
20°-30°	279.8	15.1
30°-40°	331.6	17.9
40°-50°	335.5	18.2
50°-60°	293.0	15.9
60°-70°	214.1	11.6
70°-80°	113.9	6.2
80°-90°	26.3	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°	533.6	28.9
0°-40°	865.1	46.8
0°-60°	1493.6	80.8
0°-90°	1848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	694	695	700	702	696	66
15°	657	662	668	672	663	185
25°	595	602	612	615	605	274
35°	515	523	536	539	531	322
45°	421	428	442	443	434	325
55°	319	326	334	329	324	285
65°	212	217	220	216	212	210
75°	105	108	110	106	104	112
85°	20	20	21	22	21	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	702.9	702.9	702.9	702.9	702.9
2.5°	697.4	699.7	702.0	703.1	697.3
5°	693.8	695.1	700.3	701.9	696.0
7.5°	687.8	689.7	694.8	695.5	689.8
10°	679.6	683.1	686.4	690.1	683.1
12.5°	669.1	673.8	679.6	680.2	674.9
15°	657.3	661.7	667.9	671.9	663.2
17.5°	644.1	648.4	656.4	657.1	651.9
20°	629.4	634.7	644.3	646.0	636.6
22.5°	612.7	619.8	627.8	629.5	622.5
25°	595.2	602.5	612.5	614.7	605.4
27.5°	576.9	583.9	595.1	596.7	588.9
30°	557.2	563.8	576.1	578.9	570.9
32.5°	537.3	543.9	557.5	559.8	552.0
35°	515.2	523.3	535.6	539.4	530.7
37.5°	492.7	500.5	514.6	517.9	508.5
40°	469.3	477.1	490.9	493.7	484.7
42.5°	445.4	453.2	468.0	468.4	460.9
45°	421.0	428.5	442.3	442.6	433.9
47.5°	396.3	403.8	416.1	414.7	406.5
50°	371.2	378.4	389.2	386.4	379.0
52.5°	345.3	352.3	362.4	357.9	350.9
55°	319.2	325.7	334.2	329.3	323.9
57.5°	292.9	299.5	306.0	301.1	296.4
60°	266.4	272.1	277.5	272.5	268.9
62.5°	239.5	244.4	249.0	244.2	240.9
65°	212.2	216.6	220.4	216.0	212.4
67.5°	185.1	188.8	192.3	187.8	184.0
70°	158.0	161.2	164.4	159.7	156.3
72.5°	131.3	134.1	137.0	132.4	129.4
75°	105.3	107.7	110.1	106.0	103.7
77.5°	80.5	82.5	84.1	81.6	79.3
80°	57.4	59.0	59.9	58.9	56.8
82.5°	36.9	38.0	38.5	38.4	37.1
85°	20.1	20.4	21.4	21.6	20.9
87.5°	7.8	8.3	8.5	9.2	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)