

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: P489162

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-40-120-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: P489162
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-LD4-4LO-40-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

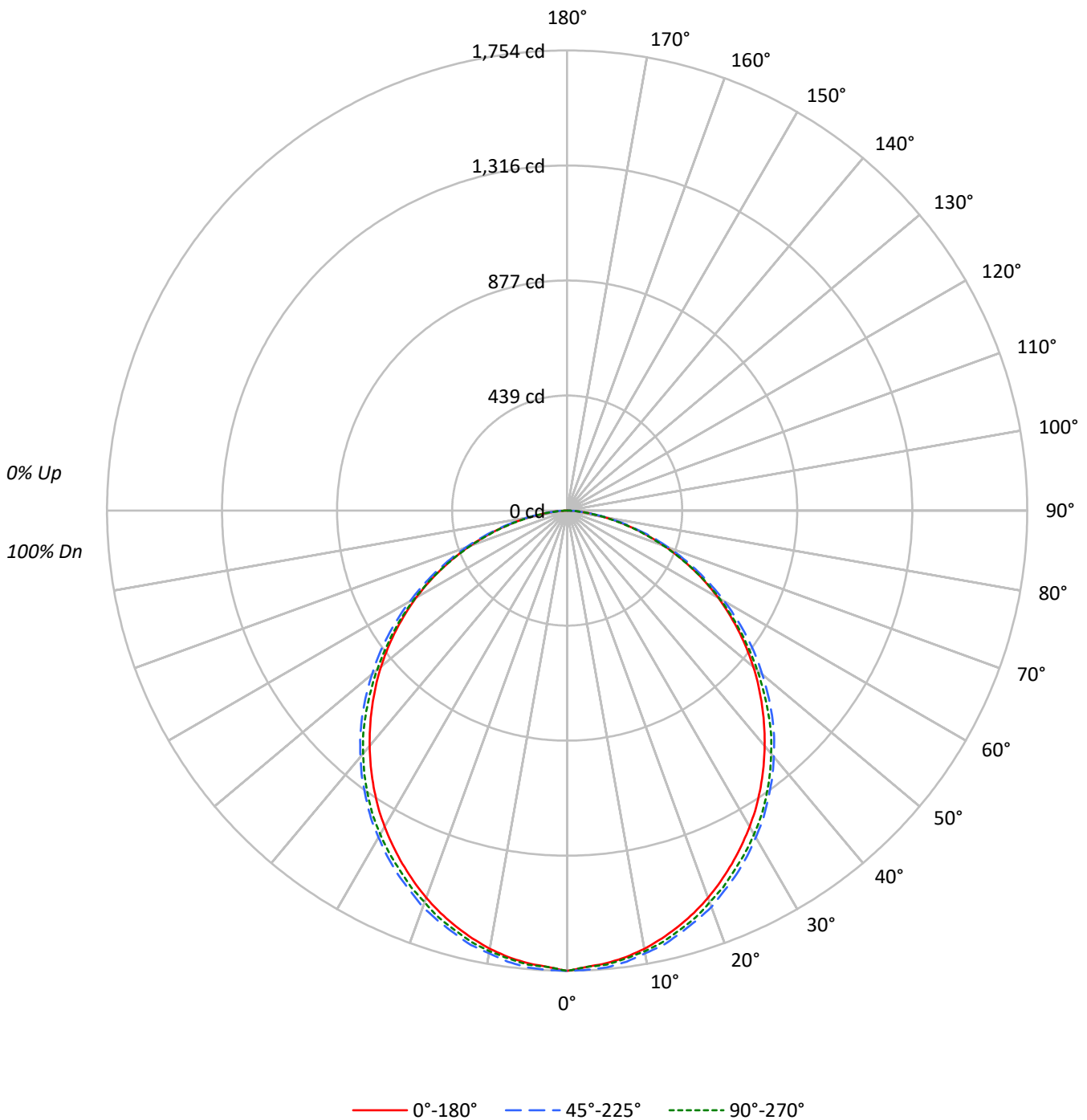
Lumens per Lamp: N/A
Luminaire Lumens: 4612.5 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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

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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°	4721	4721	4721
5°	4677	4722	4692
10°	4635	4682	4659
15°	4571	4644	4612
20°	4499	4605	4550
25°	4411	4539	4487
30°	4322	4468	4428
35°	4224	4392	4351
40°	4115	4304	4249
45°	3999	4201	4121
50°	3879	4067	3960
55°	3738	3913	3793
60°	3579	3728	3612
65°	3373	3502	3375
70°	3104	3229	3069
75°	2733	2856	2691
80°	2221	2317	2196
85°	1547	1649	1609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	3.6
10°-20°	468.2	10.2
20°-30°	698.4	15.1
30°-40°	827.6	17.9
40°-50°	837.4	18.2
50°-60°	731.3	15.9
60°-70°	534.4	11.6
70°-80°	284.3	6.2
80°-90°	65.7	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°	1331.8	28.9
0°-40°	2159.4	46.8
0°-60°	3728.0	80.8
0°-90°	4612.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4612.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1754	1754	1754	1754	1754	
5°	1732	1735	1748	1752	1737	164
15°	1641	1652	1667	1677	1655	462
25°	1486	1504	1529	1534	1511	684
35°	1286	1306	1337	1346	1324	804
45°	1051	1070	1104	1105	1083	811
55°	797	813	834	822	808	712
65°	530	540	550	539	530	524
75°	263	269	275	265	259	279
85°	50	51	53	54	52	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1754.4	1754.4	1754.4	1754.4	1754.4
2.5°	1740.7	1746.4	1752.2	1754.8	1740.5
5°	1731.6	1734.9	1747.9	1751.9	1737.1
7.5°	1716.6	1721.5	1734.1	1736.0	1721.7
10°	1696.1	1704.9	1713.3	1722.4	1705.1
12.5°	1670.0	1681.9	1696.1	1697.8	1684.6
15°	1640.6	1651.5	1667.1	1677.1	1655.4
17.5°	1607.6	1618.3	1638.4	1640.2	1627.0
20°	1570.9	1584.1	1608.2	1612.4	1588.8
22.5°	1529.2	1547.0	1567.1	1571.1	1553.7
25°	1485.5	1503.8	1528.7	1534.4	1511.1
27.5°	1439.8	1457.4	1485.4	1489.4	1469.8
30°	1390.9	1407.3	1438.0	1444.8	1424.9
32.5°	1341.1	1357.6	1391.6	1397.3	1377.9
35°	1285.9	1306.0	1336.9	1346.3	1324.5
37.5°	1229.6	1249.2	1284.3	1292.7	1269.3
40°	1171.3	1190.7	1225.3	1232.2	1209.7
42.5°	1111.7	1131.1	1168.0	1169.1	1150.5
45°	1050.9	1069.5	1103.9	1104.8	1083.0
47.5°	989.1	1007.9	1038.6	1035.1	1014.7
50°	926.6	944.5	971.4	964.4	945.9
52.5°	861.9	879.2	904.6	893.3	875.9
55°	796.8	812.9	834.1	822.0	808.5
57.5°	731.2	747.4	763.7	751.5	739.8
60°	665.0	679.3	692.6	680.2	671.2
62.5°	597.7	610.0	621.5	609.6	601.2
65°	529.7	540.5	550.0	539.1	530.1
67.5°	462.1	471.2	480.0	468.7	459.4
70°	394.5	402.3	410.4	398.7	390.1
72.5°	327.7	334.7	341.8	330.5	323.0
75°	262.9	268.9	274.7	264.7	258.8
77.5°	200.9	206.0	210.0	203.6	198.0
80°	143.3	147.1	149.5	147.0	141.7
82.5°	92.1	94.9	96.1	96.0	92.5
85°	50.1	51.0	53.4	53.9	52.1
87.5°	19.4	20.7	21.2	22.8	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)