

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: P489191

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5LO-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: P489191
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-LD4-5LO-20-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

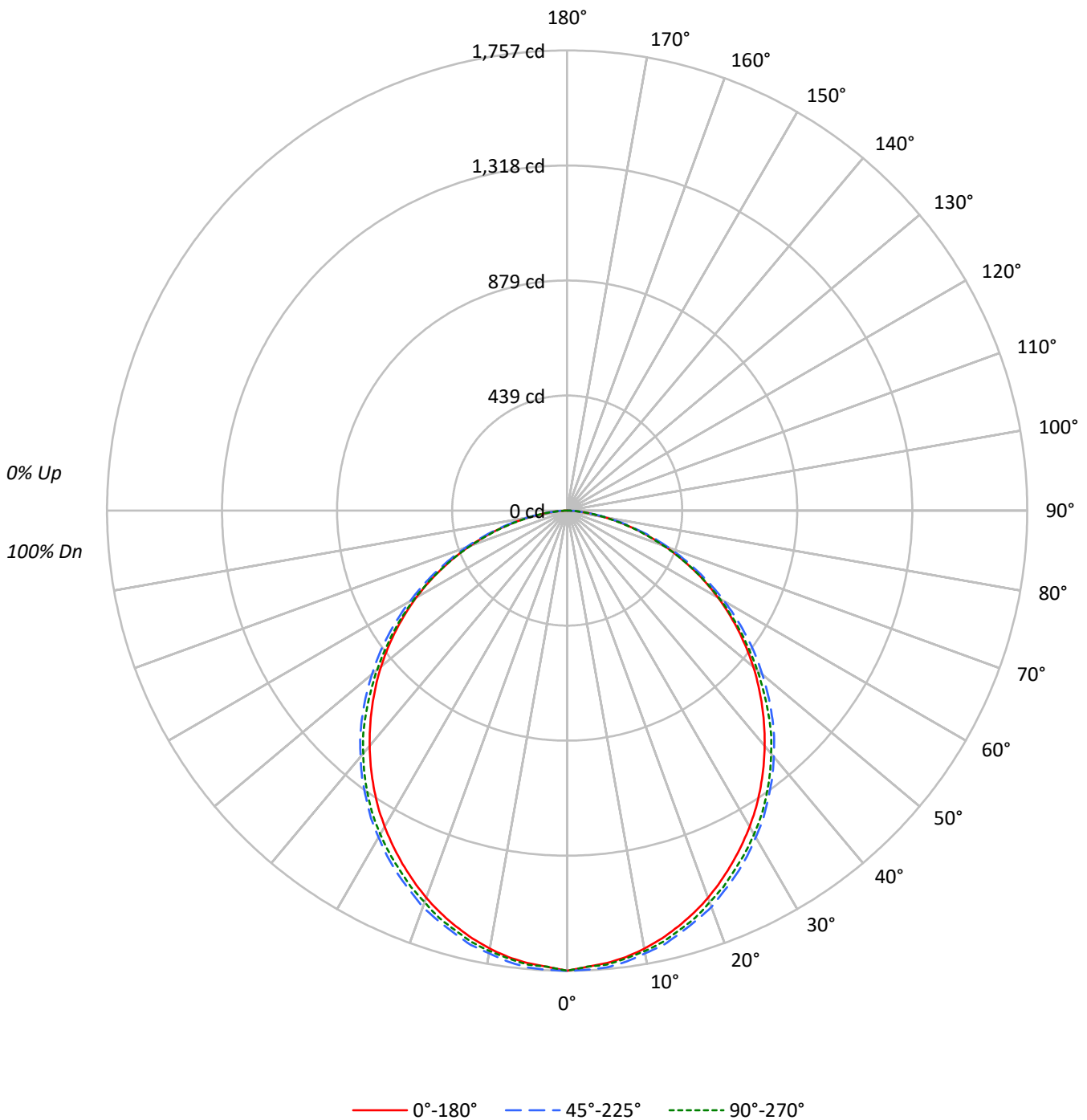
Lumens per Lamp: N/A
Luminaire Lumens: 4619.9 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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	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					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4729	4729	4729
5°	4685	4729	4700
10°	4642	4689	4667
15°	4578	4652	4619
20°	4506	4613	4557
25°	4418	4546	4494
30°	4329	4475	4434
35°	4231	4399	4358
40°	4121	4311	4256
45°	4006	4207	4128
50°	3885	4073	3967
55°	3744	3919	3799
60°	3585	3733	3618
65°	3379	3508	3380
70°	3109	3234	3074
75°	2738	2861	2695
80°	2224	2321	2199
85°	1550	1652	1612



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.5	3.6
10°-20°	469.0	10.2
20°-30°	699.5	15.1
30°-40°	828.9	17.9
40°-50°	838.7	18.2
50°-60°	732.5	15.9
60°-70°	535.3	11.6
70°-80°	284.8	6.2
80°-90°	65.8	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°	1333.9	28.9
0°-40°	2162.8	46.8
0°-60°	3734.0	80.8
0°-90°	4619.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4619.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1757	1757	1757	1757	1757	
5°	1734	1738	1751	1755	1740	164
15°	1643	1654	1670	1680	1658	463
25°	1488	1506	1531	1537	1514	686
35°	1288	1308	1339	1348	1327	805
45°	1053	1071	1106	1107	1085	812
55°	798	814	835	823	810	713
65°	531	541	551	540	531	525
75°	263	269	275	265	259	280
85°	50	51	54	54	52	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1757.2	1757.2	1757.2	1757.2	1757.2
2.5°	1743.5	1749.2	1755.0	1757.6	1743.3
5°	1734.4	1737.7	1750.7	1754.7	1739.9
7.5°	1719.3	1724.3	1736.9	1738.8	1724.5
10°	1698.8	1707.6	1716.1	1725.2	1707.8
12.5°	1672.7	1684.6	1698.8	1700.5	1687.3
15°	1643.2	1654.2	1669.7	1679.8	1658.0
17.5°	1610.2	1620.8	1641.0	1642.8	1629.6
20°	1573.4	1586.6	1610.8	1615.0	1591.4
22.5°	1531.7	1549.4	1569.6	1573.6	1556.2
25°	1487.9	1506.2	1531.1	1536.8	1513.6
27.5°	1442.2	1459.7	1487.7	1491.8	1472.2
30°	1393.1	1409.6	1440.3	1447.1	1427.1
32.5°	1343.3	1359.8	1393.8	1399.5	1380.1
35°	1288.0	1308.1	1339.1	1348.4	1326.6
37.5°	1231.6	1251.2	1286.4	1294.8	1271.3
40°	1173.2	1192.6	1227.2	1234.2	1211.7
42.5°	1113.5	1132.9	1169.9	1171.0	1152.3
45°	1052.6	1071.2	1105.6	1106.6	1084.8
47.5°	990.7	1009.5	1040.3	1036.8	1016.3
50°	928.1	946.0	972.9	966.0	947.5
52.5°	863.2	880.6	906.1	894.7	877.3
55°	798.1	814.2	835.4	823.3	809.8
57.5°	732.3	748.6	764.9	752.7	740.9
60°	666.1	680.3	693.7	681.3	672.3
62.5°	598.7	611.0	622.5	610.6	602.2
65°	530.6	541.4	550.9	539.9	530.9
67.5°	462.8	472.0	480.8	469.4	460.1
70°	395.1	403.0	411.0	399.3	390.7
72.5°	328.3	335.2	342.4	331.0	323.5
75°	263.3	269.3	275.2	265.1	259.2
77.5°	201.2	206.3	210.4	204.0	198.3
80°	143.5	147.4	149.8	147.2	141.9
82.5°	92.3	95.0	96.3	96.1	92.6
85°	50.2	51.1	53.5	54.0	52.2
87.5°	19.4	20.7	21.2	22.9	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)