

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: P489166

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4STD-20-120-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: P489166
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-LD4-4STD-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

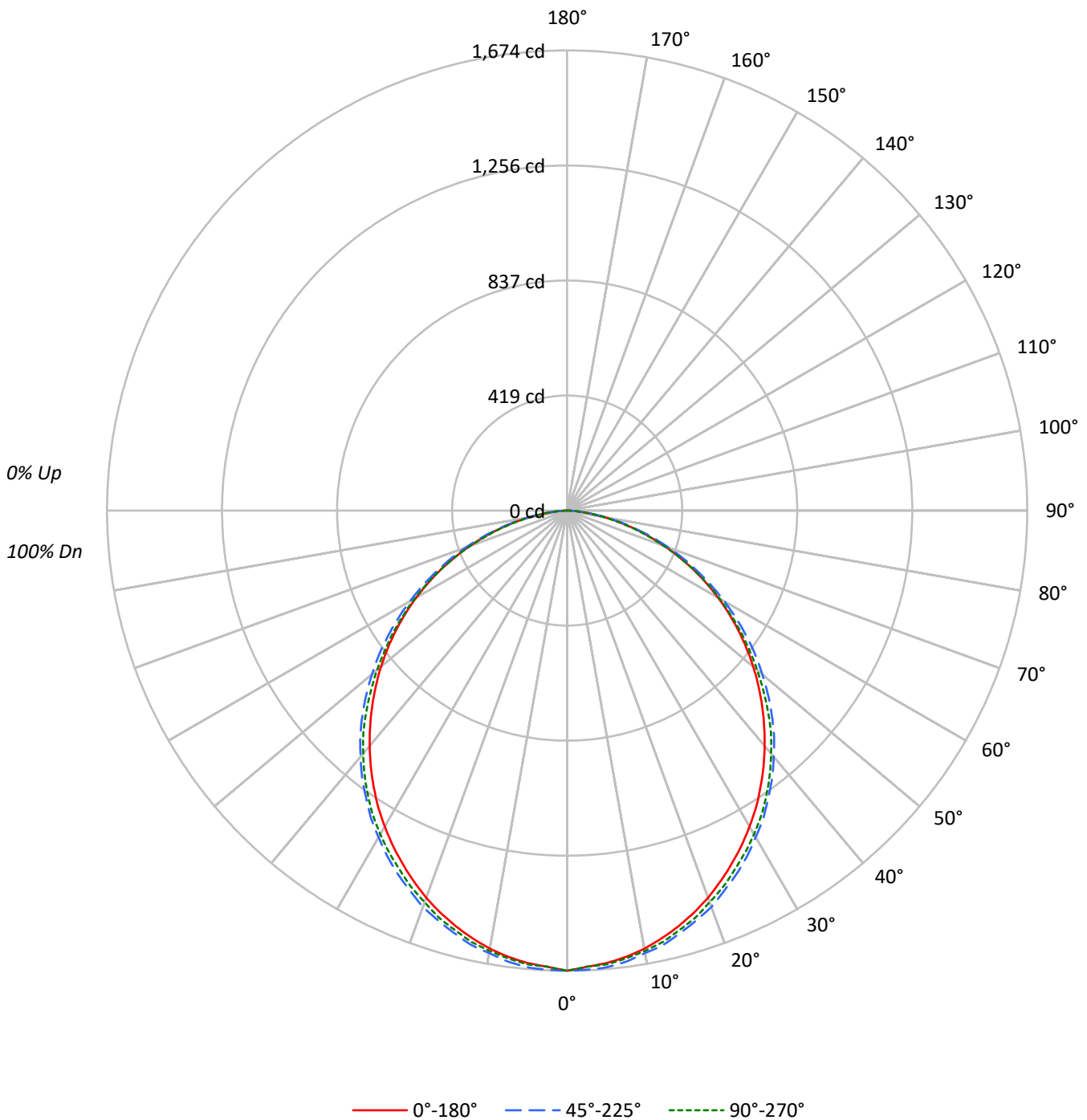
Lumens per Lamp: N/A
Luminaire Lumens: 4401.0 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4505	4505	4505
5°	4463	4505	4477
10°	4422	4467	4445
15°	4361	4431	4400
20°	4292	4394	4341
25°	4208	4331	4281
30°	4124	4263	4224
35°	4031	4190	4152
40°	3926	4107	4055
45°	3816	4008	3933
50°	3701	3880	3779
55°	3567	3734	3619
60°	3415	3556	3447
65°	3218	3342	3221
70°	2961	3080	2928
75°	2608	2725	2568
80°	2118	2211	2095
85°	1476	1572	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.7	3.6
10°-20°	446.8	10.2
20°-30°	666.3	15.1
30°-40°	789.6	17.9
40°-50°	799.0	18.2
50°-60°	697.8	15.9
60°-70°	509.9	11.6
70°-80°	271.3	6.2
80°-90°	62.7	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°	1270.7	28.9
0°-40°	2060.3	46.8
0°-60°	3557.1	80.8
0°-90°	4401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1652	1655	1668	1672	1657	157
15°	1565	1576	1591	1600	1580	441
25°	1417	1435	1459	1464	1442	653
35°	1227	1246	1276	1284	1264	767
45°	1003	1020	1053	1054	1033	774
55°	760	776	796	784	771	680
65°	505	516	525	514	506	500
75°	251	257	262	252	247	267
85°	48	49	51	52	50	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1674.0	1674.0	1674.0	1674.0	1674.0
2.5°	1660.9	1666.3	1671.9	1674.3	1660.7
5°	1652.2	1655.3	1667.7	1671.5	1657.4
7.5°	1637.9	1642.6	1654.6	1656.4	1642.8
10°	1618.3	1626.7	1634.7	1643.5	1626.9
12.5°	1593.4	1604.7	1618.3	1619.9	1607.4
15°	1565.3	1575.8	1590.6	1600.2	1579.5
17.5°	1533.9	1544.0	1563.2	1565.0	1552.4
20°	1498.9	1511.4	1534.5	1538.5	1516.0
22.5°	1459.1	1476.0	1495.2	1499.1	1482.5
25°	1417.4	1434.9	1458.6	1464.0	1441.8
27.5°	1373.8	1390.6	1417.3	1421.1	1402.4
30°	1327.1	1342.8	1372.1	1378.5	1359.5
32.5°	1279.6	1295.3	1327.8	1333.2	1314.7
35°	1227.0	1246.2	1275.6	1284.5	1263.8
37.5°	1173.3	1191.9	1225.4	1233.4	1211.1
40°	1117.6	1136.1	1169.1	1175.7	1154.2
42.5°	1060.8	1079.2	1114.5	1115.5	1097.7
45°	1002.7	1020.5	1053.3	1054.1	1033.4
47.5°	943.7	961.7	991.0	987.7	968.1
50°	884.1	901.2	926.8	920.2	902.6
52.5°	822.3	838.9	863.2	852.3	835.8
55°	760.3	775.6	795.8	784.3	771.4
57.5°	697.6	713.2	728.7	717.0	705.8
60°	634.5	648.1	660.8	649.0	640.4
62.5°	570.3	582.0	593.0	581.7	573.6
65°	505.4	515.7	524.8	514.3	505.8
67.5°	440.9	449.6	458.0	447.2	438.3
70°	376.4	383.9	391.5	380.4	372.2
72.5°	312.7	319.3	326.1	315.3	308.2
75°	250.8	256.6	262.1	252.5	247.0
77.5°	191.7	196.6	200.4	194.3	188.9
80°	136.7	140.4	142.7	140.2	135.2
82.5°	87.9	90.5	91.7	91.6	88.3
85°	47.8	48.7	50.9	51.5	49.7
87.5°	18.5	19.7	20.2	21.8	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)