

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: P489660

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-27-120-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: P489660
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-24-4-INS-A19156-LD4-3LO-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

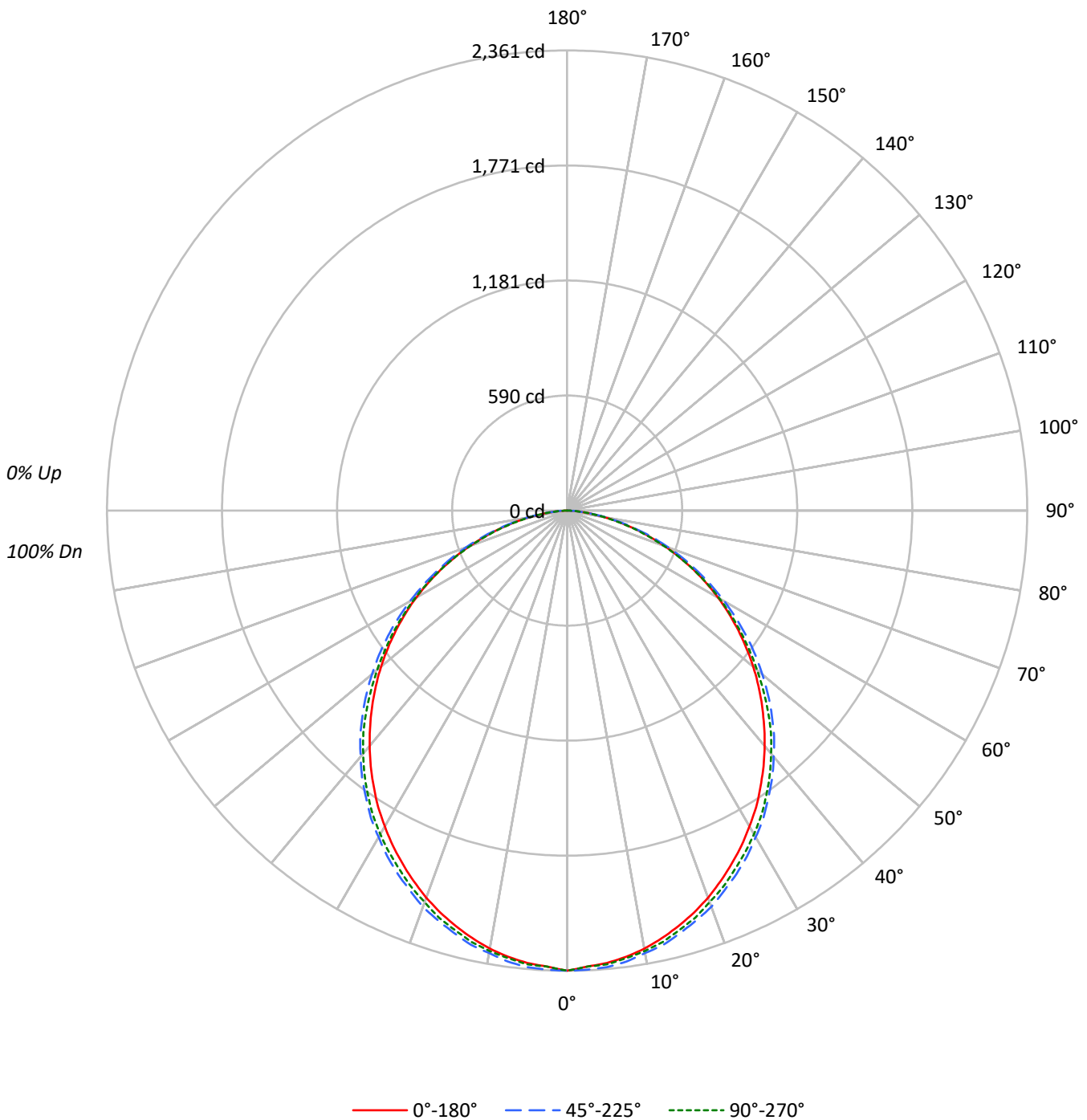
Lumens per Lamp: N/A
Luminaire Lumens: 6206.4 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	3176	3176	3176
5°	3147	3176	3157
10°	3118	3150	3135
15°	3075	3125	3103
20°	3027	3098	3061
25°	2968	3054	3019
30°	2908	3006	2979
35°	2842	2955	2927
40°	2768	2896	2859
45°	2691	2826	2773
50°	2610	2736	2664
55°	2515	2633	2552
60°	2408	2508	2430
65°	2269	2356	2271
70°	2088	2172	2065
75°	1839	1922	1811
80°	1494	1559	1477
85°	1041	1108	1082



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.3	3.6
10°-20°	630.0	10.2
20°-30°	939.7	15.1
30°-40°	1113.5	17.9
40°-50°	1126.7	18.2
50°-60°	984.0	15.9
60°-70°	719.1	11.6
70°-80°	382.6	6.2
80°-90°	88.4	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°	1792.0	28.9
0°-40°	2905.6	46.8
0°-60°	5016.3	80.8
0°-90°	6206.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6206.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2361	2361	2361	2361	2361	
5°	2330	2334	2352	2357	2337	221
15°	2208	2222	2243	2257	2227	622
25°	1999	2024	2057	2065	2033	921
35°	1730	1757	1799	1812	1782	1082
45°	1414	1439	1485	1487	1457	1091
55°	1072	1094	1122	1106	1088	958
65°	713	727	740	725	713	705
75°	354	362	370	356	348	376
85°	67	69	72	73	70	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2360.7	2360.7	2360.7	2360.7	2360.7
2.5°	2342.2	2349.9	2357.7	2361.2	2342.0
5°	2329.9	2334.4	2351.8	2357.3	2337.3
7.5°	2309.8	2316.4	2333.4	2335.9	2316.7
10°	2282.2	2294.0	2305.4	2317.7	2294.3
12.5°	2247.1	2263.0	2282.2	2284.4	2266.7
15°	2207.5	2222.2	2243.1	2256.7	2227.4
17.5°	2163.2	2177.5	2204.5	2207.0	2189.3
20°	2113.8	2131.5	2163.9	2169.6	2137.9
22.5°	2057.7	2081.5	2108.6	2114.0	2090.6
25°	1998.9	2023.5	2056.9	2064.6	2033.3
27.5°	1937.4	1961.0	1998.6	2004.1	1977.7
30°	1871.5	1893.6	1934.9	1944.0	1917.2
32.5°	1804.6	1826.7	1872.5	1880.1	1854.0
35°	1730.3	1757.4	1798.9	1811.5	1782.2
37.5°	1654.6	1680.9	1728.1	1739.4	1707.9
40°	1576.1	1602.2	1648.6	1658.0	1627.7
42.5°	1495.9	1522.0	1571.7	1573.1	1548.1
45°	1414.0	1439.1	1485.3	1486.6	1457.3
47.5°	1330.9	1356.2	1397.5	1392.9	1365.3
50°	1246.8	1270.9	1307.0	1297.7	1272.8
52.5°	1159.7	1183.1	1217.2	1202.0	1178.6
55°	1072.1	1093.8	1122.3	1106.1	1087.9
57.5°	983.8	1005.7	1027.6	1011.1	995.4
60°	894.8	914.0	931.9	915.2	903.2
62.5°	804.3	820.8	836.3	820.3	809.0
65°	712.8	727.3	740.1	725.3	713.3
67.5°	621.8	634.1	645.9	630.6	618.1
70°	530.8	541.4	552.2	536.4	524.9
72.5°	441.0	450.3	459.9	444.7	434.6
75°	353.7	361.8	369.7	356.1	348.3
77.5°	270.3	277.2	282.6	274.0	266.4
80°	192.8	198.0	201.2	197.7	190.6
82.5°	124.0	127.7	129.4	129.1	124.5
85°	67.4	68.6	71.8	72.6	70.1
87.5°	26.1	27.8	28.5	30.7	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)