

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: P489130

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3STD-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: P489130
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-LD4-3STD-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

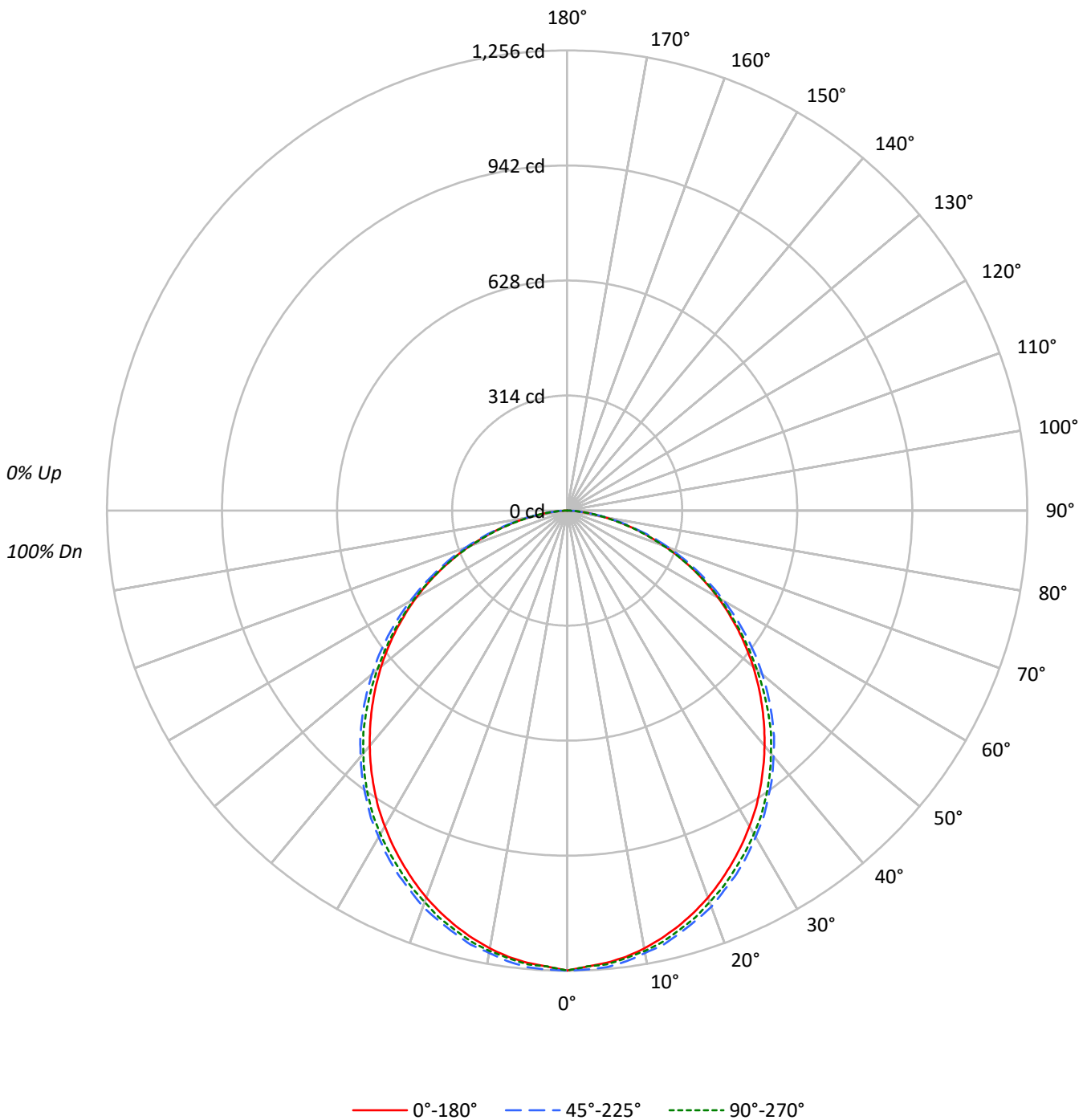
Lumens per Lamp: N/A
Luminaire Lumens: 3300.7 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	3379	3379	3379
5°	3347	3379	3358
10°	3316	3350	3334
15°	3271	3323	3300
20°	3219	3296	3256
25°	3157	3248	3211
30°	3093	3197	3168
35°	3023	3143	3114
40°	2944	3080	3041
45°	2862	3006	2949
50°	2776	2910	2834
55°	2675	2800	2715
60°	2561	2667	2585
65°	2414	2506	2415
70°	2221	2311	2196
75°	1956	2044	1926
80°	1590	1658	1571
85°	1105	1179	1152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	3.6
10°-20°	335.1	10.2
20°-30°	499.7	15.1
30°-40°	592.2	17.9
40°-50°	599.2	18.2
50°-60°	523.3	15.9
60°-70°	382.4	11.6
70°-80°	203.5	6.2
80°-90°	47.0	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°	953.0	28.9
0°-40°	1545.2	46.8
0°-60°	2667.8	80.8
0°-90°	3300.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3300.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1239	1242	1251	1254	1243	117
15°	1174	1182	1193	1200	1185	331
25°	1063	1076	1094	1098	1081	490
35°	920	935	957	963	948	575
45°	752	765	790	791	775	580
55°	570	582	597	588	579	510
65°	379	387	394	386	379	375
75°	188	192	197	189	185	200
85°	36	36	38	39	37	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1255.5	1255.5	1255.5	1255.5	1255.5
2.5°	1245.7	1249.7	1253.9	1255.7	1245.5
5°	1239.1	1241.5	1250.8	1253.6	1243.0
7.5°	1228.4	1231.9	1240.9	1242.3	1232.1
10°	1213.7	1220.0	1226.0	1232.6	1220.2
12.5°	1195.0	1203.5	1213.7	1214.9	1205.5
15°	1174.0	1181.8	1192.9	1200.1	1184.6
17.5°	1150.4	1158.0	1172.4	1173.7	1164.3
20°	1124.1	1133.6	1150.8	1153.8	1137.0
22.5°	1094.3	1107.0	1121.4	1124.3	1111.8
25°	1063.1	1076.1	1093.9	1098.0	1081.4
27.5°	1030.4	1042.9	1062.9	1065.8	1051.8
30°	995.3	1007.1	1029.0	1033.9	1019.6
32.5°	959.7	971.5	995.8	999.9	986.0
35°	920.2	934.6	956.7	963.4	947.8
37.5°	879.9	893.9	919.0	925.1	908.3
40°	838.2	852.1	876.8	881.8	865.7
42.5°	795.6	809.4	835.8	836.6	823.3
45°	752.0	765.3	789.9	790.6	775.0
47.5°	707.8	721.3	743.2	740.8	726.1
50°	663.1	675.9	695.1	690.1	676.9
52.5°	616.7	629.2	647.4	639.2	626.8
55°	570.2	581.7	596.9	588.2	578.6
57.5°	523.2	534.9	546.5	537.7	529.4
60°	475.9	486.1	495.6	486.7	480.3
62.5°	427.7	436.5	444.7	436.2	430.2
65°	379.1	386.8	393.6	385.7	379.3
67.5°	330.7	337.2	343.5	335.4	328.7
70°	282.3	287.9	293.7	285.3	279.1
72.5°	234.5	239.5	244.6	236.5	231.1
75°	188.1	192.4	196.6	189.4	185.2
77.5°	143.8	147.4	150.3	145.7	141.7
80°	102.6	105.3	107.0	105.2	101.4
82.5°	65.9	67.9	68.8	68.7	66.2
85°	35.8	36.5	38.2	38.6	37.3
87.5°	13.9	14.8	15.2	16.4	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)