

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: P489604

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1STD-35-120-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: P489604
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-LD4-1STD-35-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

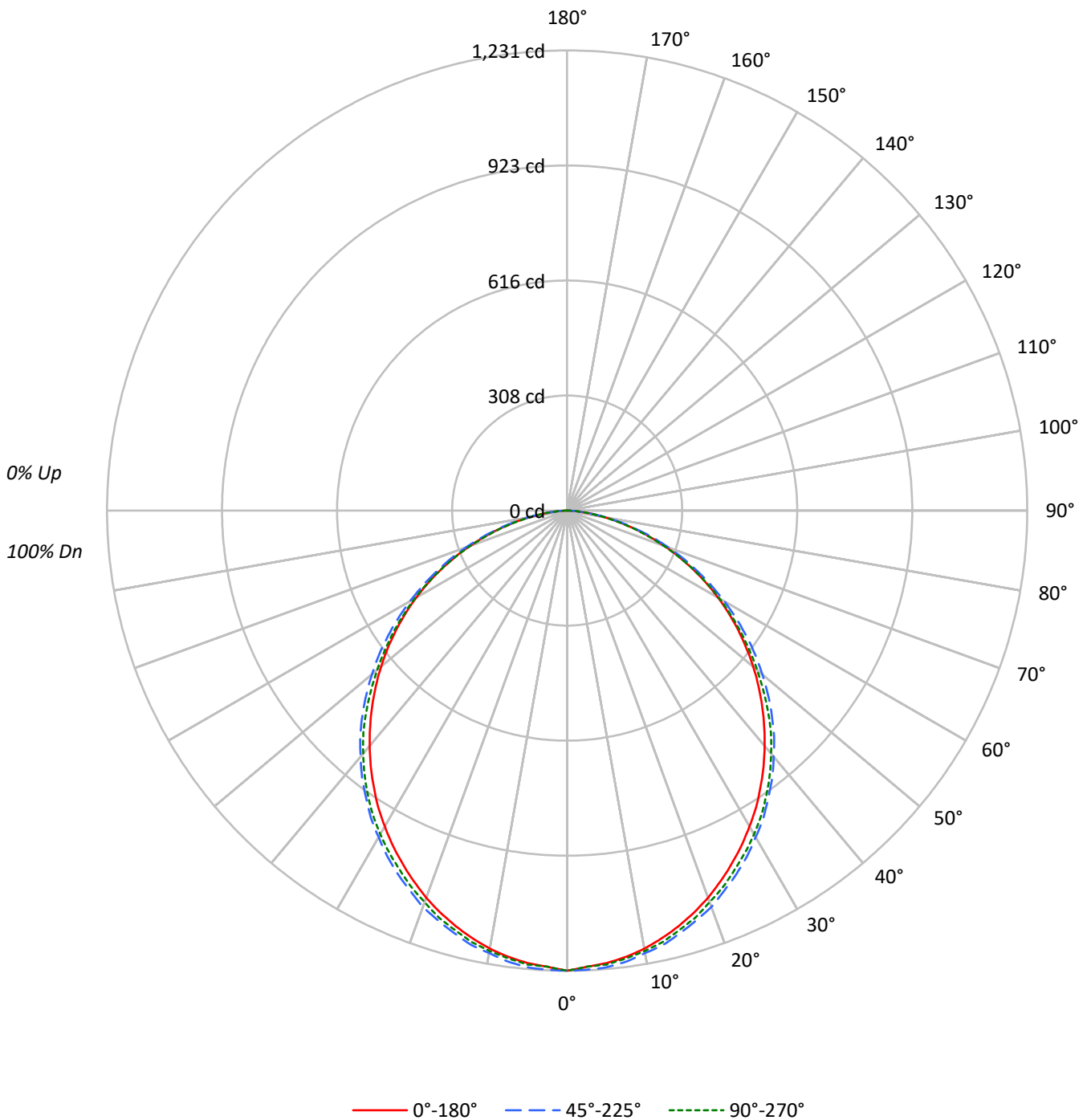
Lumens per Lamp: N/A
Luminaire Lumens: 3236.2 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	1656	1656	1656
5°	1641	1656	1646
10°	1626	1642	1634
15°	1603	1629	1618
20°	1578	1616	1596
25°	1547	1592	1574
30°	1516	1567	1553
35°	1482	1541	1526
40°	1443	1510	1491
45°	1403	1474	1446
50°	1361	1427	1389
55°	1311	1373	1331
60°	1256	1308	1267
65°	1183	1229	1184
70°	1089	1133	1077
75°	959	1002	944
80°	779	813	770
85°	542	577	565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.6
10°-20°	328.5	10.2
20°-30°	490.0	15.1
30°-40°	580.6	17.9
40°-50°	587.5	18.2
50°-60°	513.1	15.9
60°-70°	374.9	11.6
70°-80°	199.5	6.2
80°-90°	46.1	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°	934.4	28.9
0°-40°	1515.0	46.8
0°-60°	2615.6	80.8
0°-90°	3236.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3236.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1215	1217	1226	1229	1219	115
15°	1151	1159	1170	1177	1161	324
25°	1042	1055	1072	1076	1060	480
35°	902	916	938	945	929	564
45°	737	750	774	775	760	569
55°	559	570	585	577	567	500
65°	372	379	386	378	372	368
75°	184	189	193	186	182	196
85°	35	36	37	38	37	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1230.9	1230.9	1230.9	1230.9	1230.9
2.5°	1221.3	1225.3	1229.4	1231.2	1221.2
5°	1214.9	1217.2	1226.3	1229.1	1218.8
7.5°	1204.4	1207.9	1216.7	1218.0	1208.0
10°	1190.0	1196.2	1202.1	1208.5	1196.3
12.5°	1171.7	1180.0	1190.0	1191.2	1181.9
15°	1151.0	1158.7	1169.6	1176.7	1161.4
17.5°	1128.0	1135.4	1149.5	1150.8	1141.5
20°	1102.2	1111.4	1128.3	1131.3	1114.7
22.5°	1072.9	1085.4	1099.5	1102.3	1090.1
25°	1042.3	1055.1	1072.5	1076.5	1060.2
27.5°	1010.2	1022.5	1042.2	1045.0	1031.3
30°	975.8	987.4	1008.9	1013.7	999.7
32.5°	941.0	952.5	976.4	980.3	966.7
35°	902.2	916.3	938.0	944.6	929.3
37.5°	862.7	876.5	901.1	907.0	890.6
40°	821.8	835.4	859.7	864.5	848.8
42.5°	780.0	793.6	819.5	820.3	807.2
45°	737.3	750.4	774.5	775.1	759.9
47.5°	694.0	707.2	728.7	726.3	711.9
50°	650.1	662.7	681.5	676.6	663.7
52.5°	604.7	616.9	634.7	626.8	614.6
55°	559.0	570.3	585.2	576.7	567.2
57.5°	513.0	524.4	535.8	527.2	519.0
60°	466.6	476.6	485.9	477.2	470.9
62.5°	419.4	428.0	436.0	427.7	421.8
65°	371.7	379.2	385.9	378.2	371.9
67.5°	324.2	330.6	336.8	328.8	322.3
70°	276.8	282.3	287.9	279.7	273.7
72.5°	230.0	234.8	239.8	231.9	226.6
75°	184.4	188.7	192.8	185.7	181.6
77.5°	140.9	144.5	147.4	142.9	138.9
80°	100.5	103.2	104.9	103.1	99.4
82.5°	64.6	66.6	67.5	67.3	64.9
85°	35.1	35.8	37.4	37.8	36.6
87.5°	13.6	14.5	14.9	16.0	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)