

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: P489102

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2STD-40-120-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: P489102
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-LD4-2STD-40-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

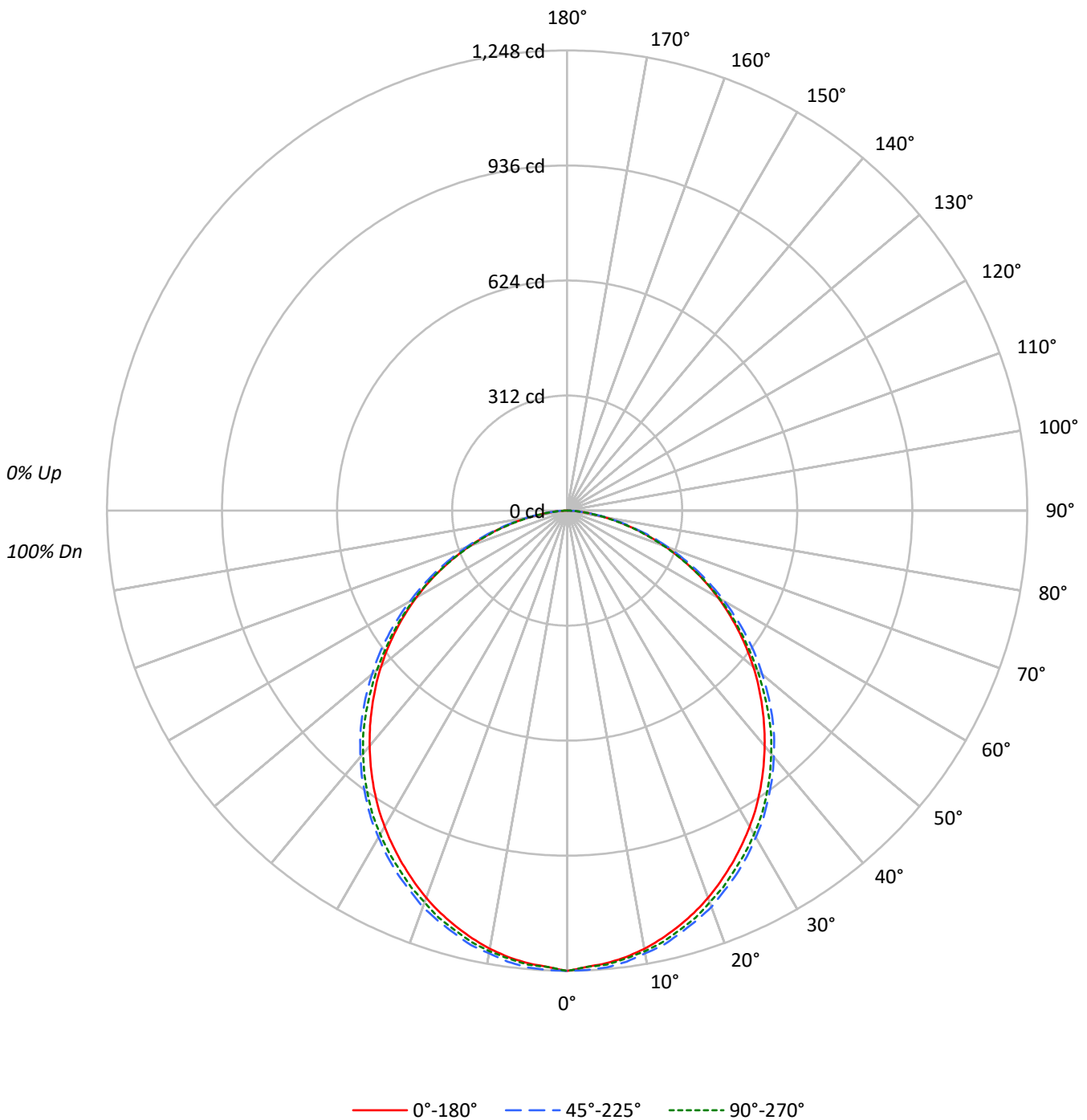
Lumens per Lamp: N/A
Luminaire Lumens: 3282.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3359	3359	3359
5°	3328	3360	3339
10°	3298	3331	3315
15°	3252	3305	3282
20°	3201	3277	3237
25°	3138	3230	3192
30°	3075	3179	3150
35°	3006	3125	3096
40°	2928	3062	3024
45°	2845	2989	2933
50°	2760	2894	2818
55°	2660	2784	2699
60°	2547	2652	2570
65°	2400	2492	2402
70°	2209	2297	2184
75°	1944	2033	1915
80°	1581	1649	1562
85°	1099	1173	1145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	3.6
10°-20°	333.2	10.2
20°-30°	496.9	15.1
30°-40°	588.8	17.9
40°-50°	595.8	18.2
50°-60°	520.4	15.9
60°-70°	380.3	11.6
70°-80°	202.3	6.2
80°-90°	46.8	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°	947.6	28.9
0°-40°	1536.5	46.8
0°-60°	2652.7	80.8
0°-90°	3282.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3282.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1248	1248	1248	1248	1248	
5°	1232	1234	1244	1246	1236	117
15°	1167	1175	1186	1193	1178	329
25°	1057	1070	1088	1092	1075	487
35°	915	929	951	958	942	572
45°	748	761	786	786	771	577
55°	567	578	594	585	575	507
65°	377	385	391	384	377	373
75°	187	191	196	188	184	199
85°	36	36	38	38	37	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1238.6	1242.6	1246.8	1248.6	1238.5
5°	1232.1	1234.4	1243.7	1246.5	1236.0
7.5°	1221.4	1224.9	1233.9	1235.2	1225.1
10°	1206.9	1213.1	1219.1	1225.6	1213.2
12.5°	1188.3	1196.7	1206.9	1208.0	1198.7
15°	1167.3	1175.1	1186.2	1193.3	1177.9
17.5°	1143.9	1151.5	1165.8	1167.1	1157.7
20°	1117.8	1127.1	1144.3	1147.3	1130.5
22.5°	1088.1	1100.7	1115.0	1117.9	1105.5
25°	1057.0	1070.0	1087.7	1091.8	1075.2
27.5°	1024.5	1037.0	1056.9	1059.8	1045.8
30°	989.7	1001.4	1023.2	1028.0	1013.9
32.5°	954.3	966.0	990.2	994.2	980.4
35°	915.0	929.3	951.3	957.9	942.4
37.5°	874.9	888.9	913.8	919.8	903.2
40°	833.5	847.2	871.8	876.8	860.8
42.5°	791.1	804.8	831.1	831.9	818.6
45°	747.7	761.0	785.5	786.1	770.6
47.5°	703.8	717.2	739.0	736.6	722.0
50°	659.3	672.0	691.2	686.2	673.1
52.5°	613.3	625.6	643.7	635.6	623.3
55°	566.9	578.4	593.5	584.9	575.3
57.5°	520.3	531.8	543.4	534.7	526.4
60°	473.2	483.3	492.8	484.0	477.6
62.5°	425.3	434.0	442.2	433.8	427.8
65°	376.9	384.6	391.4	383.6	377.2
67.5°	328.8	335.3	341.5	333.5	326.9
70°	280.7	286.3	292.0	283.7	277.6
72.5°	233.2	238.1	243.2	235.2	229.8
75°	187.0	191.3	195.5	188.3	184.2
77.5°	142.9	146.6	149.4	144.9	140.9
80°	102.0	104.7	106.4	104.6	100.8
82.5°	65.6	67.5	68.4	68.3	65.8
85°	35.6	36.3	38.0	38.4	37.1
87.5°	13.8	14.7	15.1	16.3	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)