

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: P489070

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2HI-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: P489070
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-LD4-2HI-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

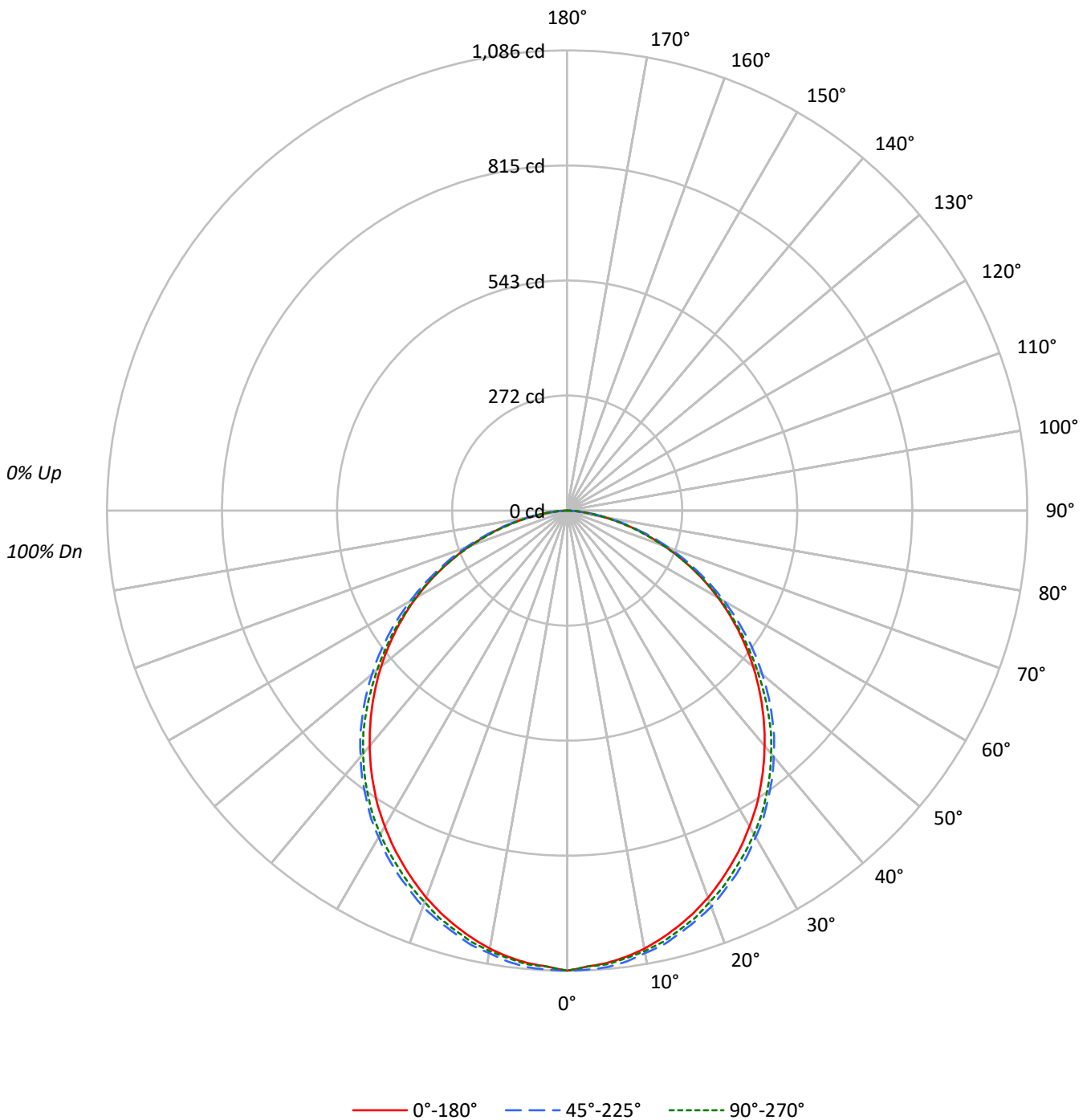
Lumens per Lamp: N/A
Luminaire Lumens: 2854.7 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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	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°	2922	2922	2922
5°	2895	2922	2904
10°	2868	2898	2884
15°	2829	2874	2854
20°	2784	2850	2816
25°	2730	2809	2777
30°	2675	2765	2740
35°	2615	2718	2693
40°	2546	2664	2630
45°	2475	2600	2551
50°	2401	2517	2451
55°	2313	2422	2348
60°	2215	2307	2236
65°	2088	2167	2089
70°	1921	1998	1899
75°	1692	1768	1666
80°	1375	1433	1359
85°	957	1019	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	3.6
10°-20°	289.8	10.2
20°-30°	432.2	15.1
30°-40°	512.2	17.9
40°-50°	518.2	18.2
50°-60°	452.6	15.9
60°-70°	330.8	11.6
70°-80°	176.0	6.2
80°-90°	40.7	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°	824.3	28.9
0°-40°	1336.4	46.8
0°-60°	2307.3	80.8
0°-90°	2854.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2854.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1072	1074	1082	1084	1075	102
15°	1015	1022	1032	1038	1024	286
25°	919	931	946	950	935	424
35°	796	808	827	833	820	498
45°	650	662	683	684	670	502
55°	493	503	516	509	500	441
65°	328	334	340	334	328	324
75°	163	166	170	164	160	173
85°	31	32	33	33	32	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.8	1085.8	1085.8	1085.8	1085.8
2.5°	1077.3	1080.8	1084.5	1086.1	1077.2
5°	1071.7	1073.7	1081.8	1084.2	1075.1
7.5°	1062.4	1065.5	1073.3	1074.4	1065.6
10°	1049.7	1055.2	1060.4	1066.0	1055.3
12.5°	1033.6	1040.9	1049.7	1050.8	1042.6
15°	1015.3	1022.1	1031.7	1038.0	1024.5
17.5°	995.0	1001.5	1014.0	1015.1	1007.0
20°	972.2	980.4	995.3	997.9	983.3
22.5°	946.4	957.4	969.9	972.4	961.6
25°	919.4	930.7	946.1	949.6	935.2
27.5°	891.1	902.0	919.3	921.8	909.7
30°	860.8	871.0	890.0	894.2	881.9
32.5°	830.0	840.2	861.3	864.8	852.8
35°	795.9	808.3	827.4	833.2	819.7
37.5°	761.0	773.1	794.9	800.1	785.6
40°	724.9	736.9	758.3	762.6	748.7
42.5°	688.1	700.1	722.9	723.6	712.0
45°	650.4	661.9	683.2	683.8	670.3
47.5°	612.1	623.8	642.8	640.7	628.0
50°	573.5	584.5	601.2	596.9	585.5
52.5°	533.4	544.2	559.9	552.9	542.1
55°	493.1	503.1	516.2	508.7	500.4
57.5°	452.5	462.6	472.7	465.1	457.8
60°	411.6	420.4	428.7	421.0	415.4
62.5°	369.9	377.5	384.6	377.3	372.1
65°	327.9	334.5	340.4	333.6	328.1
67.5°	286.0	291.7	297.1	290.1	284.3
70°	244.1	249.0	254.0	246.7	241.4
72.5°	202.8	207.1	211.6	204.5	199.9
75°	162.7	166.4	170.0	163.8	160.2
77.5°	124.3	127.5	130.0	126.0	122.5
80°	88.7	91.1	92.5	91.0	87.7
82.5°	57.0	58.7	59.5	59.4	57.2
85°	31.0	31.6	33.0	33.4	32.2
87.5°	12.0	12.8	13.1	14.1	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)