

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: P489034

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1HI-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: P489034
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-LD4-1HI-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

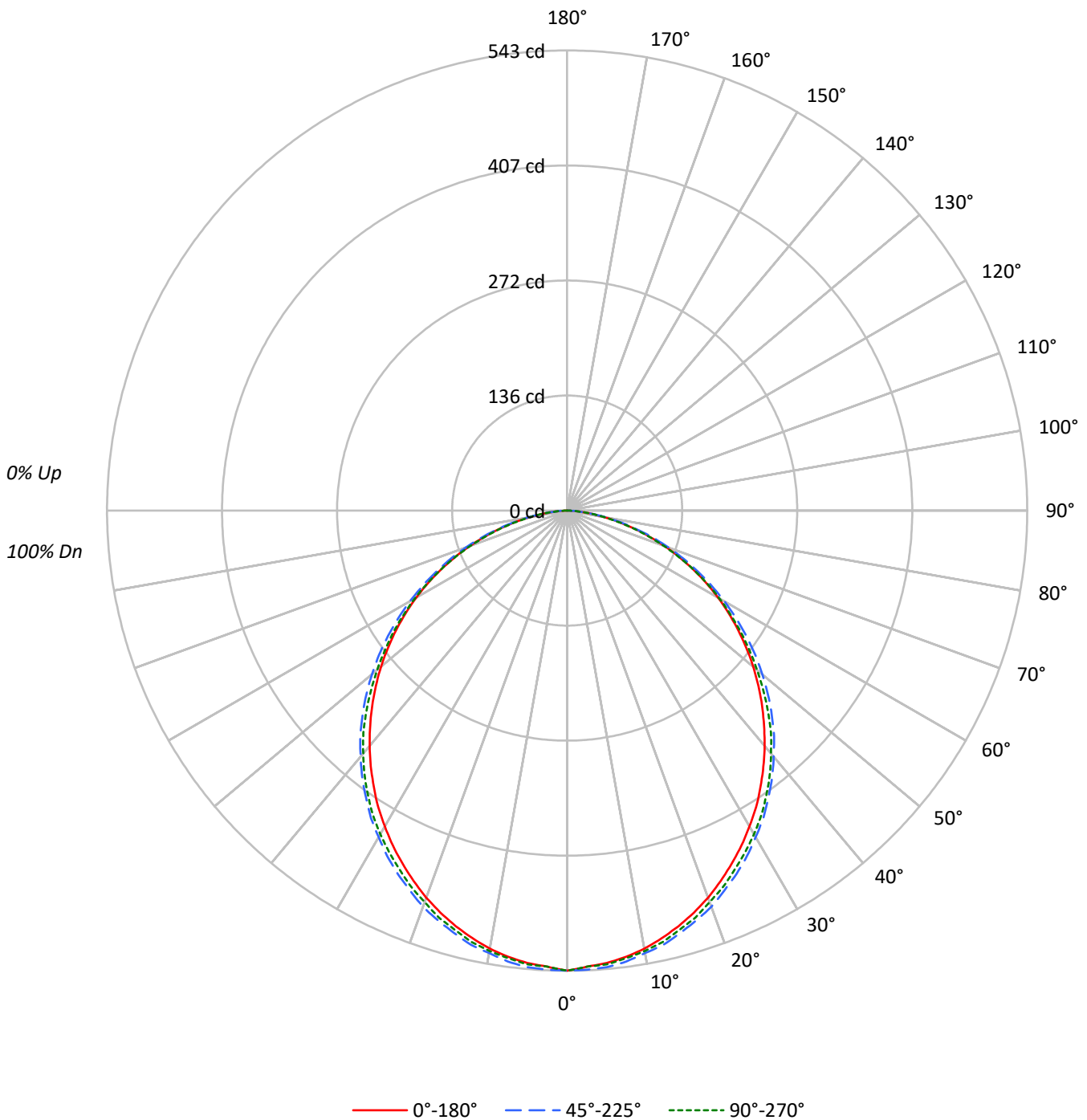
Lumens per Lamp: N/A
Luminaire Lumens: 1427.3 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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

TEST NUMBER: P489034

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-1HI-20-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P489034

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-1HI-20-120-EDD-90

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°	1461	1461	1461
5°	1447	1461	1452
10°	1434	1449	1442
15°	1414	1437	1427
20°	1392	1425	1408
25°	1365	1404	1388
30°	1337	1383	1370
35°	1307	1359	1347
40°	1273	1332	1315
45°	1238	1300	1275
50°	1200	1258	1225
55°	1157	1211	1174
60°	1108	1153	1118
65°	1044	1084	1044
70°	961	999	950
75°	845	884	833
80°	687	717	679
85°	479	509	497



TEST NUMBER: P489034

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-1HI-20-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.1	3.6
10°-20°	144.9	10.2
20°-30°	216.1	15.1
30°-40°	256.1	17.9
40°-50°	259.1	18.2
50°-60°	226.3	15.9
60°-70°	165.4	11.6
70°-80°	88.0	6.2
80°-90°	20.3	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°	412.1	28.9
0°-40°	668.2	46.8
0°-60°	1153.6	80.8
0°-90°	1427.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1427.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	536	537	541	542	538	51
15°	508	511	516	519	512	143
25°	460	465	473	475	468	212
35°	398	404	414	417	410	249
45°	325	331	342	342	335	251
55°	247	252	258	254	250	220
65°	164	167	170	167	164	162
75°	81	83	85	82	80	86
85°	16	16	16	17	16	20
90°	0	0	0	0	0	



TEST NUMBER: P489034

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-1HI-20-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	542.9	542.9	542.9	542.9	542.9
2.5°	538.7	540.4	542.2	543.0	538.6
5°	535.8	536.8	540.9	542.1	537.5
7.5°	531.2	532.7	536.6	537.2	532.8
10°	524.9	527.6	530.2	533.0	527.6
12.5°	516.8	520.4	524.9	525.4	521.3
15°	507.7	511.0	515.9	519.0	512.2
17.5°	497.5	500.8	507.0	507.5	503.5
20°	486.1	490.2	497.6	498.9	491.6
22.5°	473.2	478.7	484.9	486.2	480.8
25°	459.7	465.3	473.0	474.8	467.6
27.5°	445.5	451.0	459.6	460.9	454.8
30°	430.4	435.5	445.0	447.1	440.9
32.5°	415.0	420.1	430.6	432.4	426.4
35°	397.9	404.1	413.7	416.6	409.9
37.5°	380.5	386.6	397.4	400.0	392.8
40°	362.5	368.5	379.1	381.3	374.3
42.5°	344.0	350.0	361.4	361.8	356.0
45°	325.2	331.0	341.6	341.9	335.1
47.5°	306.1	311.9	321.4	320.3	314.0
50°	286.7	292.3	300.6	298.4	292.7
52.5°	266.7	272.1	279.9	276.4	271.1
55°	246.6	251.5	258.1	254.4	250.2
57.5°	226.3	231.3	236.3	232.5	228.9
60°	205.8	210.2	214.3	210.5	207.7
62.5°	185.0	188.8	192.3	188.6	186.0
65°	163.9	167.3	170.2	166.8	164.0
67.5°	143.0	145.8	148.5	145.0	142.1
70°	122.1	124.5	127.0	123.4	120.7
72.5°	101.4	103.6	105.8	102.3	99.9
75°	81.3	83.2	85.0	81.9	80.1
77.5°	62.2	63.7	65.0	63.0	61.3
80°	44.3	45.5	46.3	45.5	43.8
82.5°	28.5	29.4	29.8	29.7	28.6
85°	15.5	15.8	16.5	16.7	16.1
87.5°	6.0	6.4	6.6	7.1	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)