

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: P489648

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-27-120-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: P489648
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-LD4-3HI-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

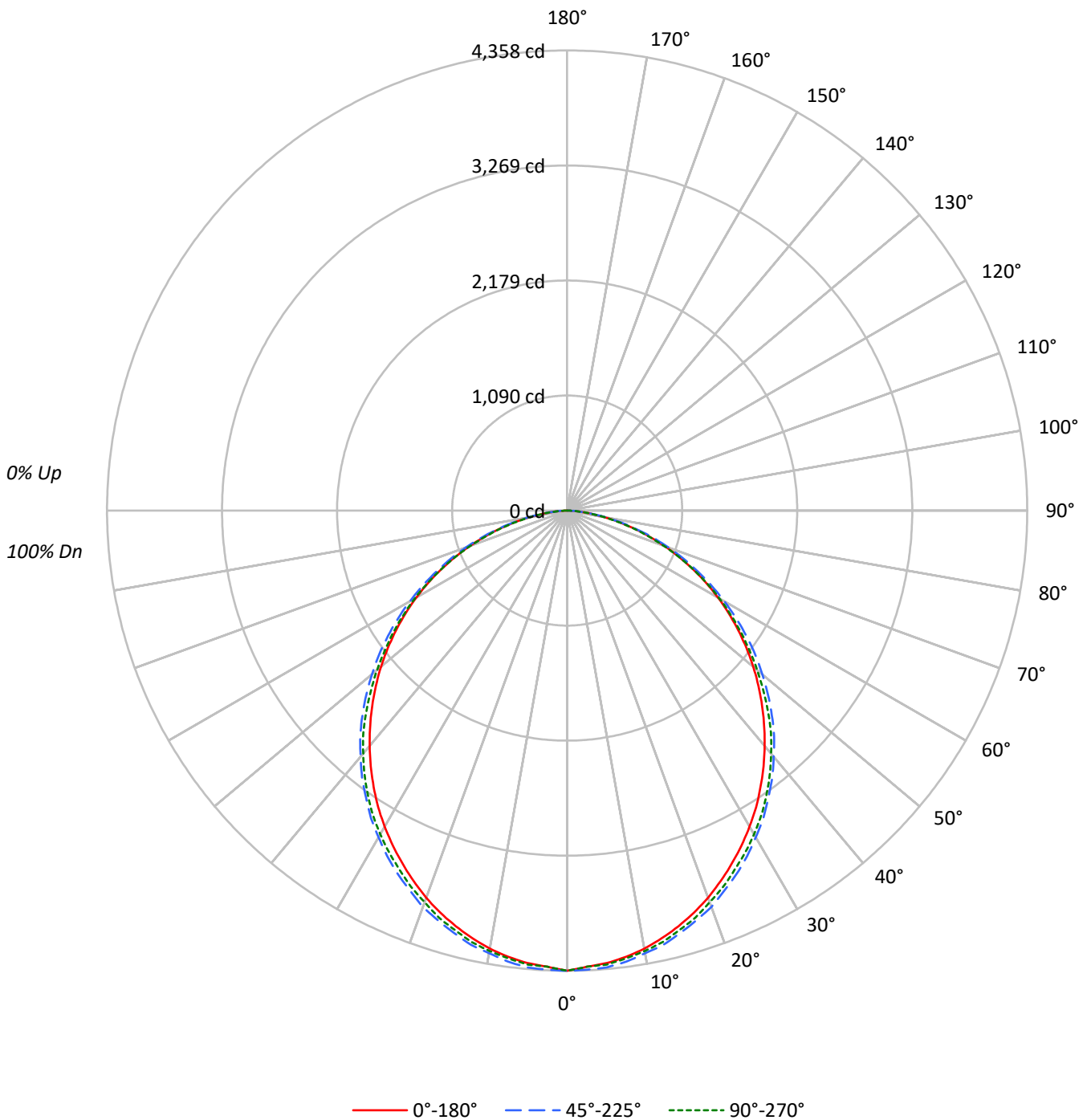
Lumens per Lamp: N/A
Luminaire Lumens: 11457.9 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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

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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°	5864	5864	5864
5°	5810	5864	5828
10°	5756	5815	5787
15°	5677	5768	5728
20°	5587	5720	5651
25°	5478	5638	5573
30°	5368	5550	5499
35°	5247	5455	5404
40°	5111	5346	5278
45°	4967	5218	5119
50°	4818	5051	4919
55°	4643	4860	4711
60°	4445	4630	4487
65°	4189	4350	4192
70°	3855	4010	3812
75°	3395	3548	3343
80°	2758	2878	2727
85°	1920	2047	1998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.5	3.6
10°-20°	1163.1	10.2
20°-30°	1734.8	15.1
30°-40°	2055.7	17.9
40°-50°	2080.1	18.2
50°-60°	1816.6	15.9
60°-70°	1327.5	11.6
70°-80°	706.3	6.2
80°-90°	163.3	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°	3308.4	28.9
0°-40°	5364.1	46.8
0°-60°	9260.8	80.8
0°-90°	11457.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11457.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4358	4358	4358	4358	4358	
5°	4301	4310	4342	4352	4315	408
15°	4075	4102	4141	4166	4112	1149
25°	3690	3736	3797	3812	3754	1700
35°	3194	3244	3321	3344	3290	1998
45°	2610	2657	2742	2744	2690	2014
55°	1979	2019	2072	2042	2008	1769
65°	1316	1343	1366	1339	1317	1302
75°	653	668	682	658	643	694
85°	124	127	133	134	129	158
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4358.2	4358.2	4358.2	4358.2	4358.2
2.5°	4324.1	4338.2	4352.7	4359.1	4323.7
5°	4301.4	4309.6	4341.8	4351.8	4315.0
7.5°	4264.2	4276.4	4307.8	4312.3	4276.9
10°	4213.3	4235.1	4256.0	4278.7	4235.6
12.5°	4148.4	4177.9	4213.3	4217.4	4184.7
15°	4075.3	4102.5	4141.1	4166.1	4112.1
17.5°	3993.6	4019.9	4069.8	4074.4	4041.7
20°	3902.3	3935.0	3994.9	4005.4	3946.8
22.5°	3798.8	3842.8	3892.8	3902.7	3859.6
25°	3690.2	3735.6	3797.4	3811.5	3753.8
27.5°	3576.7	3620.3	3689.8	3699.8	3651.2
30°	3455.0	3495.9	3572.2	3589.0	3539.5
32.5°	3331.5	3372.4	3456.8	3470.9	3422.8
35°	3194.4	3244.3	3321.1	3344.2	3290.2
37.5°	3054.5	3103.1	3190.3	3211.2	3153.1
40°	2909.7	2957.8	3043.6	3060.9	3005.0
42.5°	2761.7	2809.8	2901.5	2904.2	2857.9
45°	2610.5	2656.8	2742.1	2744.4	2690.4
47.5°	2457.0	2503.7	2580.0	2571.4	2520.6
50°	2301.7	2346.2	2412.9	2395.7	2349.8
52.5°	2140.9	2184.1	2247.2	2219.0	2175.9
55°	1979.3	2019.3	2071.9	2042.0	2008.4
57.5°	1816.3	1856.7	1897.1	1866.7	1837.6
60°	1651.9	1687.3	1720.5	1689.6	1667.4
62.5°	1484.8	1515.2	1543.8	1514.3	1493.4
65°	1315.9	1342.7	1366.3	1339.1	1316.8
67.5°	1147.9	1170.6	1192.4	1164.2	1141.1
70°	979.9	999.4	1019.4	990.3	969.0
72.5°	814.2	831.4	849.1	821.0	802.3
75°	653.0	667.9	682.5	657.5	643.0
77.5°	499.0	511.7	521.7	505.8	491.8
80°	356.0	365.5	371.4	365.1	351.9
82.5°	228.9	235.7	238.8	238.4	229.8
85°	124.4	126.7	132.6	134.0	129.4
87.5°	48.1	51.3	52.7	56.8	52.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)