

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: P489736

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489736
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-LD4-5LO-35-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

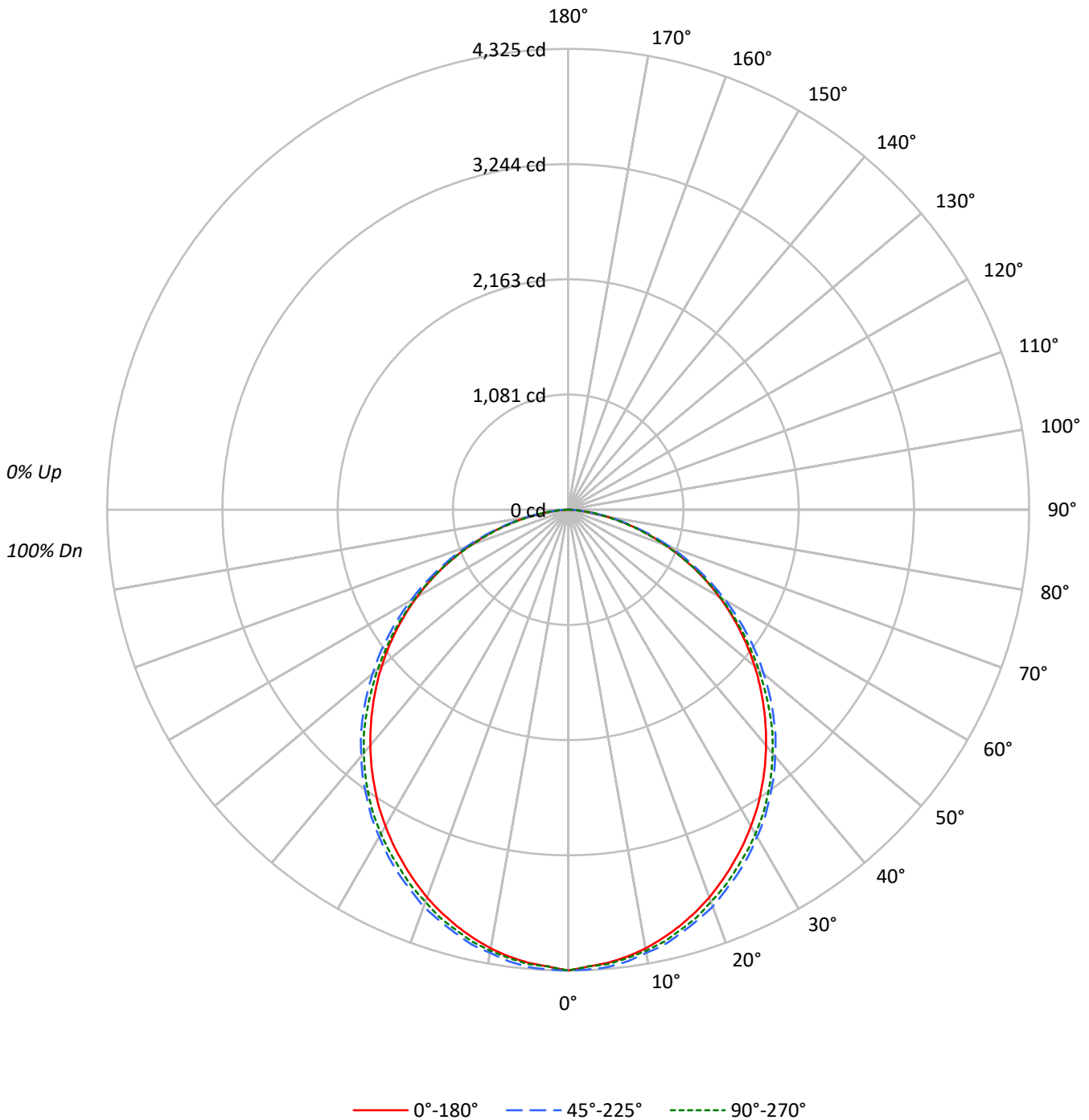
Lumens per Lamp: N/A
Luminaire Lumens: 11370.3 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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°	5819	5819	5819
5°	5765	5819	5784
10°	5712	5770	5743
15°	5633	5724	5684
20°	5545	5676	5608
25°	5437	5595	5530
30°	5327	5507	5457
35°	5207	5413	5363
40°	5071	5305	5238
45°	4929	5178	5080
50°	4781	5012	4881
55°	4608	4823	4675
60°	4411	4594	4452
65°	4157	4317	4160
70°	3825	3980	3783
75°	3369	3521	3317
80°	2737	2856	2706
85°	1907	2032	1982



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	407.3	3.6
10°-20°	1154.2	10.2
20°-30°	1721.5	15.1
30°-40°	2040.0	17.9
40°-50°	2064.2	18.2
50°-60°	1802.7	15.9
60°-70°	1317.4	11.6
70°-80°	700.9	6.2
80°-90°	162.0	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°	3283.1	28.9
0°-40°	5323.1	46.8
0°-60°	9190.0	80.8
0°-90°	11370.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11370.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4325	4325	4325	4325	4325	
5°	4268	4277	4309	4318	4282	405
15°	4044	4071	4110	4134	4081	1140
25°	3662	3707	3768	3782	3725	1687
35°	3170	3220	3296	3319	3265	1982
45°	2590	2636	2721	2723	2670	1998
55°	1964	2004	2056	2026	1993	1756
65°	1306	1332	1356	1329	1307	1292
75°	648	663	677	652	638	689
85°	124	126	132	133	128	156
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4324.9	4324.9	4324.9	4324.9	4324.9
2.5°	4291.1	4305.0	4319.5	4325.8	4290.6
5°	4268.5	4276.6	4308.6	4318.5	4282.1
7.5°	4231.6	4243.7	4274.8	4279.3	4244.2
10°	4181.1	4202.7	4223.5	4246.0	4203.2
12.5°	4116.7	4146.0	4181.1	4185.2	4152.7
15°	4044.1	4071.2	4109.5	4134.3	4080.6
17.5°	3963.0	3989.2	4038.7	4043.2	4010.8
20°	3872.5	3904.9	3964.4	3974.7	3916.6
22.5°	3769.7	3813.4	3863.0	3872.9	3830.1
25°	3662.0	3707.1	3768.4	3782.3	3725.1
27.5°	3549.4	3592.6	3661.6	3671.5	3623.3
30°	3428.6	3469.2	3544.9	3561.5	3512.4
32.5°	3306.1	3346.6	3430.4	3444.4	3396.6
35°	3170.0	3219.5	3295.7	3318.7	3265.0
37.5°	3031.2	3079.4	3165.9	3186.6	3129.0
40°	2887.4	2935.2	3020.4	3037.5	2982.1
42.5°	2740.5	2788.3	2879.3	2882.0	2836.1
45°	2590.5	2636.5	2721.2	2723.4	2669.8
47.5°	2438.2	2484.6	2560.3	2551.7	2501.3
50°	2284.1	2328.2	2394.5	2377.4	2331.9
52.5°	2124.6	2167.4	2230.0	2202.1	2159.3
55°	1964.2	2003.8	2056.1	2026.3	1993.0
57.5°	1802.4	1842.5	1882.6	1852.4	1823.6
60°	1639.3	1674.4	1707.3	1676.7	1654.6
62.5°	1473.5	1503.7	1532.0	1502.8	1482.0
65°	1305.8	1332.4	1355.9	1328.8	1306.7
67.5°	1139.1	1161.6	1183.3	1155.3	1132.4
70°	972.4	991.8	1011.6	982.8	961.6
72.5°	807.9	825.0	842.6	814.7	796.2
75°	648.0	662.8	677.3	652.5	638.0
77.5°	495.2	507.8	517.7	502.0	488.0
80°	353.3	362.7	368.6	362.3	349.2
82.5°	227.1	233.9	237.0	236.6	228.0
85°	123.5	125.7	131.6	132.9	128.4
87.5°	47.8	50.9	52.3	56.3	51.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)