

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: P489713

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-35-120-EDD**

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: P489713
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-LD4-4STD-35-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

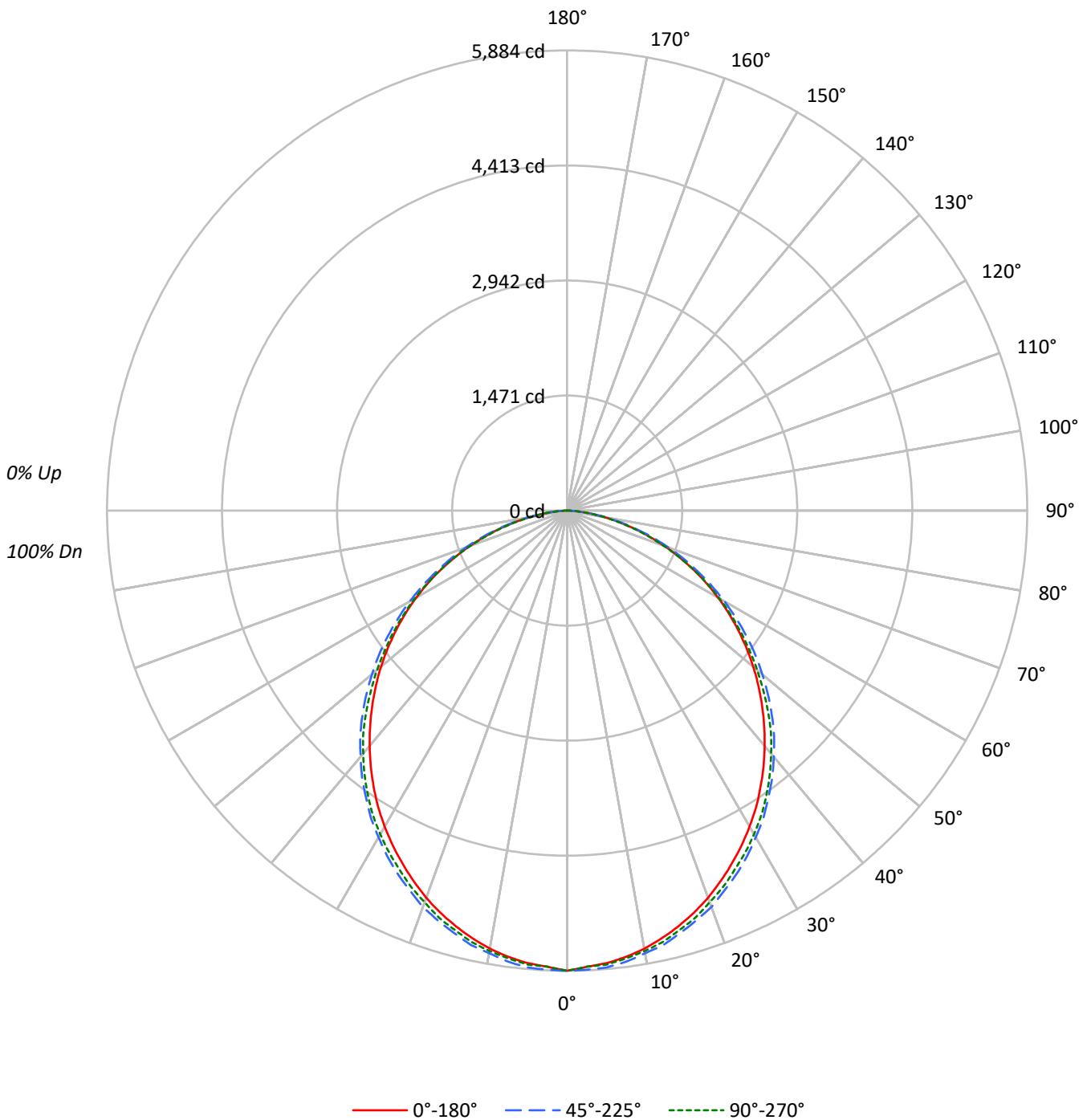
Lumens per Lamp: N/A
Luminaire Lumens: 15470.1 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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	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°	7917	7917	7917
5°	7844	7918	7869
10°	7772	7851	7813
15°	7664	7788	7734
20°	7544	7723	7630
25°	7397	7612	7524
30°	7248	7493	7425
35°	7084	7365	7297
40°	6900	7218	7126
45°	6707	7045	6912
50°	6505	6819	6641
55°	6269	6562	6361
60°	6002	6251	6058
65°	5656	5873	5660
70°	5205	5414	5147
75°	4583	4790	4513
80°	3724	3886	3681
85°	2594	2763	2697



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	554.2	3.6
10°-20°	1570.4	10.2
20°-30°	2342.2	15.1
30°-40°	2775.6	17.9
40°-50°	2808.4	18.2
50°-60°	2452.8	15.9
60°-70°	1792.4	11.6
70°-80°	953.7	6.2
80°-90°	220.4	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°	4466.8	28.9
0°-40°	7242.4	46.8
0°-60°	12503.6	80.8
0°-90°	15470.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15470.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5884	5884	5884	5884	5884	
5°	5808	5819	5862	5876	5826	551
15°	5502	5539	5591	5625	5552	1551
25°	4982	5044	5127	5146	5068	2295
35°	4313	4380	4484	4515	4442	2697
45°	3525	3587	3702	3705	3632	2719
55°	2672	2726	2798	2757	2712	2389
65°	1777	1813	1845	1808	1778	1758
75°	882	902	921	888	868	937
85°	168	171	179	181	175	213
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5884.3	5884.3	5884.3	5884.3	5884.3
2.5°	5838.3	5857.3	5876.9	5885.5	5837.7
5°	5807.6	5818.7	5862.2	5875.7	5826.0
7.5°	5757.4	5773.9	5816.2	5822.4	5774.5
10°	5688.7	5718.1	5746.3	5777.0	5718.7
12.5°	5601.0	5640.9	5688.7	5694.2	5650.1
15°	5502.3	5539.1	5591.2	5624.9	5552.0
17.5°	5392.0	5427.5	5495.0	5501.1	5457.0
20°	5268.8	5312.9	5393.8	5407.9	5328.8
22.5°	5129.0	5188.4	5255.9	5269.4	5211.1
25°	4982.4	5043.8	5127.1	5146.1	5068.3
27.5°	4829.2	4888.0	4981.8	4995.3	4929.7
30°	4664.9	4720.0	4823.0	4845.7	4778.9
32.5°	4498.1	4553.3	4667.3	4686.3	4621.3
35°	4313.0	4380.4	4484.0	4515.3	4442.3
37.5°	4124.1	4189.7	4307.5	4335.7	4257.2
40°	3928.6	3993.6	4109.4	4132.7	4057.3
42.5°	3728.7	3793.7	3917.5	3921.2	3858.7
45°	3524.6	3587.1	3702.3	3705.4	3632.5
47.5°	3317.3	3380.5	3483.5	3471.8	3403.2
50°	3107.7	3167.7	3257.9	3234.6	3172.7
52.5°	2890.6	2948.9	3034.1	2996.1	2937.8
55°	2672.4	2726.3	2797.5	2757.0	2711.6
57.5°	2452.3	2506.9	2561.4	2520.3	2481.1
60°	2230.4	2278.2	2322.9	2281.2	2251.2
62.5°	2004.7	2045.8	2084.4	2044.6	2016.4
65°	1776.7	1812.9	1844.7	1808.0	1777.9
67.5°	1549.8	1580.5	1609.9	1571.9	1540.7
70°	1323.0	1349.4	1376.3	1337.1	1308.3
72.5°	1099.2	1122.5	1146.4	1108.4	1083.3
75°	881.6	901.8	921.4	887.7	868.1
77.5°	673.8	690.9	704.4	683.0	664.0
80°	480.6	493.5	501.5	492.9	475.1
82.5°	309.0	318.2	322.5	321.9	310.2
85°	168.0	171.0	179.0	180.9	174.7
87.5°	65.0	69.3	71.1	76.6	70.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)