

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: P489691

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-40-120-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: P489691
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-LD4-4HI-40-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

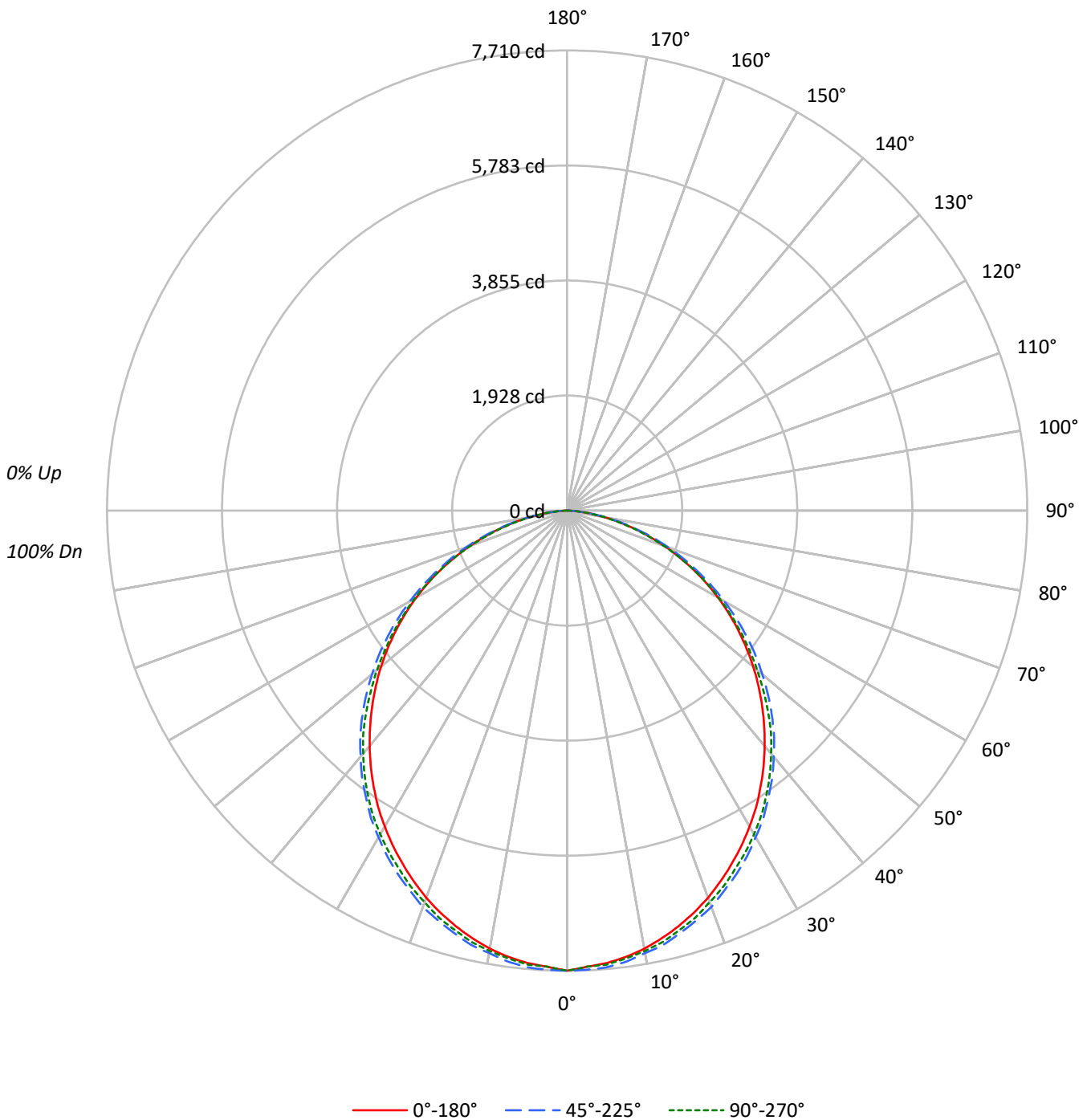
Lumens per Lamp: N/A
Luminaire Lumens: 20270.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10374	10374	10374
5°	10278	10374	10310
10°	10184	10287	10237
15°	10042	10205	10133
20°	9885	10119	9997
25°	9692	9973	9859
30°	9496	9818	9728
35°	9282	9650	9561
40°	9041	9457	9337
45°	8787	9231	9056
50°	8523	8935	8701
55°	8214	8598	8335
60°	7864	8191	7938
65°	7411	7695	7416
70°	6819	7094	6744
75°	6005	6276	5913
80°	4880	5091	4824
85°	3398	3622	3534



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	726.1	3.6
10°-20°	2057.7	10.2
20°-30°	3068.9	15.1
30°-40°	3636.7	17.9
40°-50°	3679.8	18.2
50°-60°	3213.8	15.9
60°-70°	2348.5	11.6
70°-80°	1249.6	6.2
80°-90°	288.8	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°	5852.8	28.9
0°-40°	9489.5	46.8
0°-60°	16383.1	80.8
0°-90°	20270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7710	7710	7710	7710	7710	
5°	7610	7624	7681	7699	7634	722
15°	7210	7258	7326	7370	7275	2032
25°	6528	6609	6718	6743	6641	3008
35°	5651	5740	5875	5916	5821	3534
45°	4618	4700	4851	4855	4760	3563
55°	3502	3572	3665	3612	3553	3130
65°	2328	2375	2417	2369	2330	2304
75°	1155	1182	1207	1163	1138	1228
85°	220	224	235	237	229	279
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7710.0	7710.0	7710.0	7710.0	7710.0
2.5°	7649.7	7674.6	7700.3	7711.6	7648.9
5°	7609.6	7624.0	7681.1	7698.7	7633.7
7.5°	7543.7	7565.4	7620.8	7628.9	7566.2
10°	7453.7	7492.3	7529.2	7569.4	7493.1
12.5°	7338.9	7391.1	7453.7	7461.0	7403.1
15°	7209.5	7257.7	7326.0	7370.2	7274.6
17.5°	7064.9	7111.5	7199.9	7207.9	7150.1
20°	6903.5	6961.3	7067.4	7085.8	6982.2
22.5°	6720.3	6798.3	6886.6	6904.3	6828.0
25°	6528.3	6608.7	6717.9	6742.8	6640.8
27.5°	6327.5	6404.6	6527.5	6545.2	6459.3
30°	6112.2	6184.5	6319.5	6349.2	6261.7
32.5°	5893.7	5966.0	6115.5	6140.4	6055.2
35°	5651.2	5739.5	5875.3	5916.2	5820.6
37.5°	5403.7	5489.7	5643.9	5680.9	5578.1
40°	5147.5	5232.6	5384.5	5415.0	5316.2
42.5°	4885.6	4970.8	5133.0	5137.8	5055.9
45°	4618.1	4700.1	4851.1	4855.1	4759.5
47.5°	4346.6	4429.3	4564.3	4549.0	4459.1
50°	4071.9	4150.6	4268.7	4238.2	4157.0
52.5°	3787.5	3863.8	3975.5	3925.7	3849.4
55°	3501.5	3572.2	3665.4	3612.4	3553.0
57.5°	3213.2	3284.7	3356.1	3302.3	3250.9
60°	2922.4	2985.0	3043.7	2989.0	2949.7
62.5°	2626.8	2680.6	2731.2	2679.0	2642.0
65°	2327.9	2375.3	2417.1	2368.9	2329.5
67.5°	2030.7	2070.9	2109.4	2059.6	2018.7
70°	1733.5	1768.0	1803.4	1752.0	1714.2
72.5°	1440.3	1470.8	1502.2	1452.4	1419.4
75°	1155.1	1181.6	1207.3	1163.2	1137.5
77.5°	882.8	905.3	923.0	894.9	870.0
80°	629.8	646.6	657.1	645.8	622.6
82.5°	404.9	416.9	422.5	421.7	406.5
85°	220.1	224.1	234.6	237.0	228.9
87.5°	85.1	90.8	93.2	100.4	92.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)