

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: P489723

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-30-120-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: P489723
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-LD4-5HI-30-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

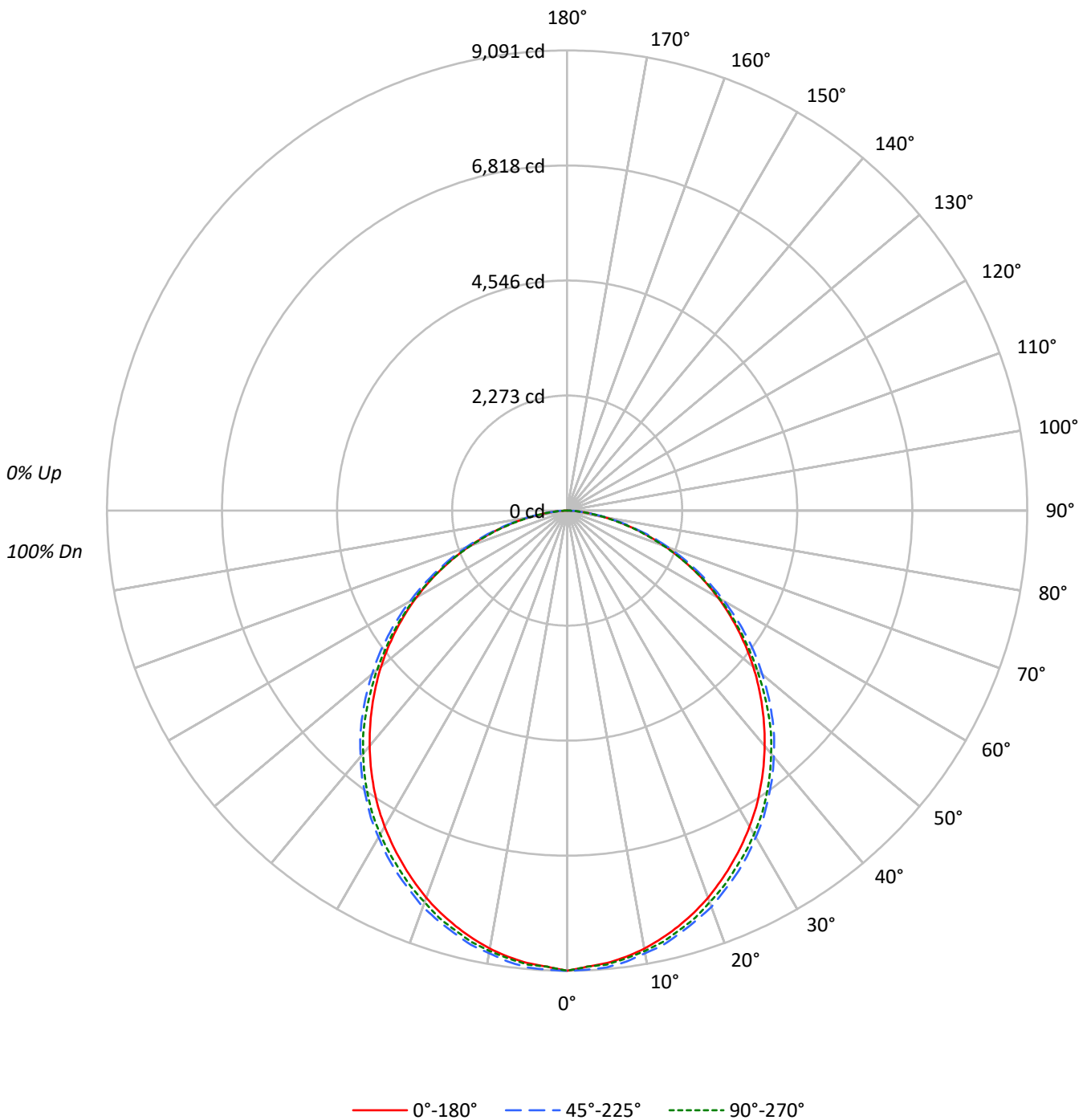
Lumens per Lamp: N/A
Luminaire Lumens: 23901.7 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 216
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°	12232	12232	12232
5°	12119	12233	12158
10°	12008	12130	12072
15°	11842	12033	11949
20°	11656	11932	11789
25°	11428	11760	11625
30°	11198	11577	11471
35°	10945	11379	11274
40°	10661	11152	11010
45°	10362	10884	10679
50°	10050	10536	10260
55°	9686	10139	9828
60°	9273	9658	9360
65°	8739	9074	8745
70°	8041	8366	7952
75°	7081	7401	6973
80°	5754	6003	5688
85°	4006	4270	4168



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	856.2	3.6
10°-20°	2426.4	10.2
20°-30°	3618.8	15.1
30°-40°	4288.3	17.9
40°-50°	4339.1	18.2
50°-60°	3789.6	15.9
60°-70°	2769.3	11.6
70°-80°	1473.5	6.2
80°-90°	340.6	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°	6901.4	28.9
0°-40°	11189.7	46.8
0°-60°	19318.4	80.8
0°-90°	23901.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23901.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9091	9091	9091	9091	9091	
5°	8973	8990	9057	9078	9001	851
15°	8501	8558	8639	8691	8578	2397
25°	7698	7793	7922	7951	7831	3547
35°	6664	6768	6928	6976	6864	4167
45°	5446	5542	5720	5725	5612	4201
55°	4129	4212	4322	4260	4190	3691
65°	2745	2801	2850	2793	2747	2716
75°	1362	1393	1424	1372	1341	1448
85°	260	264	277	279	270	329
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9091.4	9091.4	9091.4	9091.4	9091.4
2.5°	9020.3	9049.7	9080.0	9093.3	9019.4
5°	8973.0	8990.0	9057.3	9078.1	9001.4
7.5°	8895.3	8920.9	8986.2	8995.7	8921.8
10°	8789.2	8834.7	8878.2	8925.6	8835.6
12.5°	8653.7	8715.3	8789.2	8797.7	8729.5
15°	8501.2	8558.1	8638.6	8690.7	8578.0
17.5°	8330.7	8385.7	8489.9	8499.3	8431.1
20°	8140.4	8208.6	8333.6	8355.4	8233.2
22.5°	7924.4	8016.3	8120.5	8141.3	8051.3
25°	7698.0	7792.7	7921.5	7950.9	7830.6
27.5°	7461.2	7552.1	7697.1	7717.9	7616.5
30°	7207.3	7292.6	7451.7	7486.8	7383.5
32.5°	6949.7	7035.0	7211.1	7240.5	7140.1
35°	6663.6	6767.8	6927.9	6976.2	6863.5
37.5°	6371.9	6473.3	6655.1	6698.7	6577.5
40°	6069.7	6170.1	6349.2	6385.2	6268.7
42.5°	5761.0	5861.4	6052.7	6058.4	5961.8
45°	5445.5	5542.1	5720.2	5725.0	5612.2
47.5°	5125.4	5222.9	5382.1	5364.1	5258.0
50°	4801.4	4894.3	5033.5	4997.5	4901.8
52.5°	4466.1	4556.1	4687.8	4629.0	4539.0
55°	4128.9	4212.3	4322.1	4259.6	4189.5
57.5°	3788.9	3873.2	3957.5	3894.0	3833.4
60°	3446.0	3519.8	3589.0	3524.6	3478.2
62.5°	3097.4	3160.9	3220.5	3159.0	3115.4
65°	2745.0	2800.9	2850.2	2793.3	2746.9
67.5°	2394.6	2441.9	2487.4	2428.7	2380.3
70°	2044.1	2084.8	2126.5	2065.9	2021.4
72.5°	1698.4	1734.3	1771.3	1712.6	1673.7
75°	1362.1	1393.4	1423.7	1371.6	1341.3
77.5°	1041.0	1067.5	1088.3	1055.2	1025.8
80°	742.6	762.5	774.8	761.6	734.1
82.5°	477.4	491.6	498.2	497.3	479.3
85°	259.5	264.3	276.6	279.4	270.0
87.5°	100.4	107.0	109.9	118.4	108.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)