

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: P489749

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-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: P489749
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-LD4-5STD-35-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

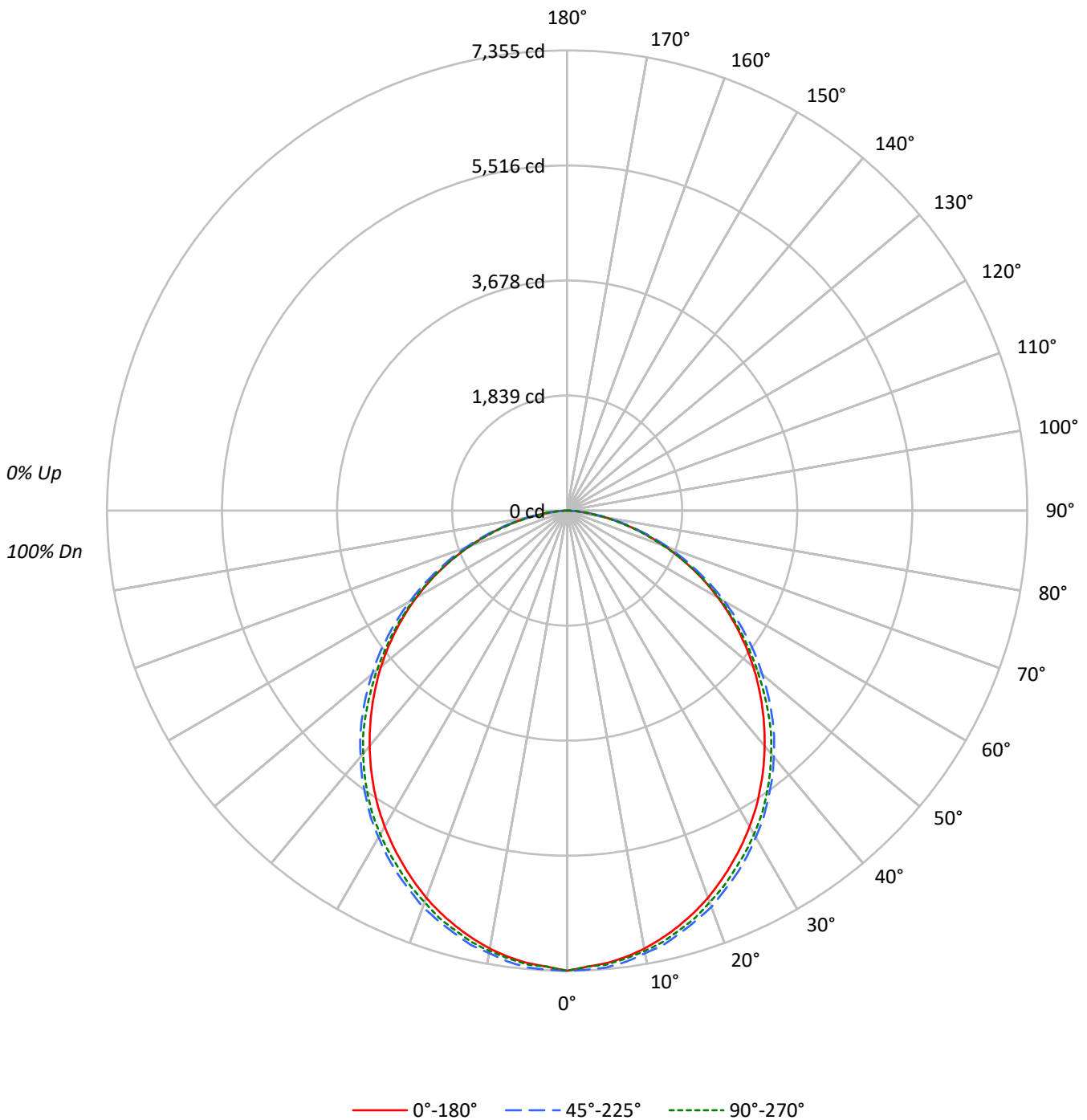
Lumens per Lamp: N/A
Luminaire Lumens: 19337.6 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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°	9896	9896	9896
5°	9805	9897	9836
10°	9715	9814	9766
15°	9581	9735	9667
20°	9430	9654	9537
25°	9246	9515	9405
30°	9059	9367	9281
35°	8855	9206	9121
40°	8625	9022	8908
45°	8383	8806	8640
50°	8131	8524	8301
55°	7836	8203	7951
60°	7502	7814	7572
65°	7071	7341	7075
70°	6506	6768	6434
75°	5729	5988	5641
80°	4655	4857	4602
85°	3242	3455	3372



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	692.7	3.6
10°-20°	1963.0	10.2
20°-30°	2927.8	15.1
30°-40°	3469.4	17.9
40°-50°	3510.6	18.2
50°-60°	3066.0	15.9
60°-70°	2240.5	11.6
70°-80°	1192.1	6.2
80°-90°	275.5	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°	5583.5	28.9
0°-40°	9053.0	46.8
0°-60°	15629.5	80.8
0°-90°	19337.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19337.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7355	7355	7355	7355	7355	
5°	7260	7273	7328	7345	7282	688
15°	6878	6924	6989	7031	6940	1939
25°	6228	6305	6409	6433	6335	2869
35°	5391	5476	5605	5644	5553	3372
45°	4406	4484	4628	4632	4541	3399
55°	3340	3408	3497	3446	3390	2986
65°	2221	2266	2306	2260	2222	2198
75°	1102	1127	1152	1110	1085	1172
85°	210	214	224	226	218	266
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7355.3	7355.3	7355.3	7355.3	7355.3
2.5°	7297.9	7321.6	7346.1	7356.9	7297.1
5°	7259.5	7273.3	7327.7	7344.6	7282.5
7.5°	7196.7	7217.4	7270.3	7277.9	7218.2
10°	7110.9	7147.7	7182.9	7221.2	7148.4
12.5°	7001.3	7051.1	7110.9	7117.8	7062.6
15°	6877.9	6923.9	6989.0	7031.2	6940.0
17.5°	6740.0	6784.4	6868.7	6876.4	6821.2
20°	6585.9	6641.1	6742.3	6759.9	6661.0
22.5°	6411.2	6485.5	6569.8	6586.7	6513.9
25°	6228.0	6304.7	6408.9	6432.7	6335.3
27.5°	6036.5	6110.0	6227.3	6244.1	6162.1
30°	5831.1	5900.1	6028.8	6057.2	5973.6
32.5°	5622.6	5691.6	5834.1	5857.9	5776.7
35°	5391.2	5475.5	5605.0	5644.1	5552.9
37.5°	5155.2	5237.2	5384.3	5419.6	5321.5
40°	4910.7	4991.9	5136.8	5165.9	5071.6
42.5°	4660.9	4742.1	4896.9	4901.5	4823.3
45°	4405.7	4483.9	4627.9	4631.8	4540.6
47.5°	4146.7	4225.6	4354.3	4339.8	4254.0
50°	3884.6	3959.7	4072.3	4043.2	3965.8
52.5°	3613.3	3686.1	3792.6	3745.1	3672.3
55°	3340.5	3407.9	3496.8	3446.2	3389.5
57.5°	3065.4	3133.6	3201.8	3150.4	3101.4
60°	2787.9	2847.7	2903.7	2851.6	2814.0
62.5°	2505.9	2557.3	2605.6	2555.7	2520.5
65°	2220.9	2266.1	2305.9	2259.9	2222.4
67.5°	1937.3	1975.6	2012.4	1964.9	1925.8
70°	1653.8	1686.7	1720.4	1671.4	1635.4
72.5°	1374.0	1403.2	1433.1	1385.5	1354.1
75°	1102.0	1127.3	1151.8	1109.7	1085.1
77.5°	842.2	863.7	880.5	853.7	829.9
80°	600.8	616.9	626.9	616.1	593.9
82.5°	386.2	397.7	403.1	402.3	387.8
85°	210.0	213.8	223.8	226.1	218.4
87.5°	81.2	86.6	88.9	95.8	88.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)