

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: P489649

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-27-120-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: P489649
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-LD4-3HI-27-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

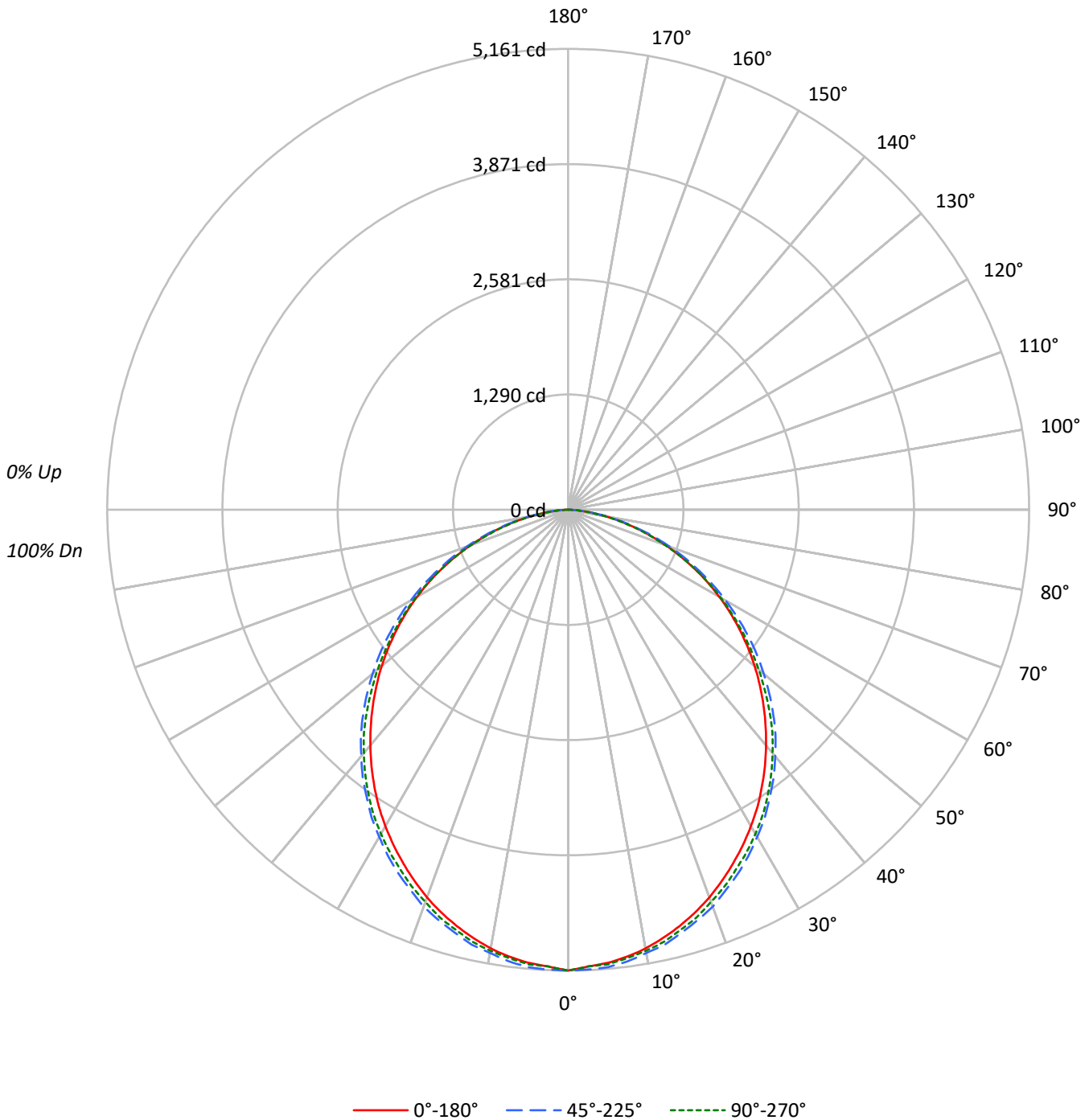
Lumens per Lamp: N/A
Luminaire Lumens: 13569.5 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6945	6945	6945
5°	6880	6945	6902
10°	6817	6886	6853
15°	6723	6831	6784
20°	6617	6774	6693
25°	6488	6676	6600
30°	6357	6573	6513
35°	6214	6460	6400
40°	6052	6331	6251
45°	5883	6179	6063
50°	5706	5982	5825
55°	5499	5756	5579
60°	5264	5483	5314
65°	4961	5152	4965
70°	4565	4749	4515
75°	4020	4201	3959
80°	3267	3409	3230
85°	2274	2424	2367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	486.1	3.6
10°-20°	1377.5	10.2
20°-30°	2054.5	15.1
30°-40°	2434.6	17.9
40°-50°	2463.4	18.2
50°-60°	2151.4	15.9
60°-70°	1572.2	11.6
70°-80°	836.5	6.2
80°-90°	193.3	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°	3918.1	28.9
0°-40°	6352.6	46.8
0°-60°	10967.5	80.8
0°-90°	13569.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13569.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5161	5161	5161	5161	5161	
5°	5094	5104	5142	5154	5110	483
15°	4826	4859	4904	4934	4870	1361
25°	4370	4424	4497	4514	4446	2013
35°	3783	3842	3933	3961	3897	2366
45°	3092	3146	3248	3250	3186	2385
55°	2344	2391	2454	2418	2378	2095
65°	1558	1590	1618	1586	1560	1542
75°	773	791	808	779	762	822
85°	147	150	157	159	153	187
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5161.4	5161.4	5161.4	5161.4	5161.4
2.5°	5121.0	5137.7	5154.9	5162.4	5120.5
5°	5094.1	5103.8	5142.0	5153.8	5110.3
7.5°	5050.0	5064.6	5101.7	5107.0	5065.1
10°	4989.8	5015.6	5040.4	5067.2	5016.2
12.5°	4912.9	4947.9	4989.8	4994.7	4955.9
15°	4826.3	4858.6	4904.3	4933.9	4869.9
17.5°	4729.5	4760.7	4819.9	4825.3	4786.5
20°	4621.5	4660.2	4731.2	4743.5	4674.2
22.5°	4498.8	4551.0	4610.2	4622.0	4570.9
25°	4370.3	4424.1	4497.2	4513.9	4445.6
27.5°	4235.9	4287.5	4369.8	4381.6	4324.1
30°	4091.8	4140.2	4230.5	4250.4	4191.8
32.5°	3945.5	3993.9	4093.9	4110.6	4053.6
35°	3783.1	3842.2	3933.1	3960.6	3896.6
37.5°	3617.5	3675.0	3778.3	3803.0	3734.2
40°	3445.9	3502.9	3604.6	3625.0	3558.9
42.5°	3270.6	3327.6	3436.2	3439.5	3384.6
45°	3091.5	3146.4	3247.5	3250.2	3186.2
47.5°	2909.8	2965.2	3055.5	3045.3	2985.1
50°	2725.9	2778.6	2857.6	2837.2	2782.9
52.5°	2535.5	2586.6	2661.3	2628.0	2576.9
55°	2344.1	2391.4	2453.8	2418.3	2378.5
57.5°	2151.0	2198.9	2246.7	2210.7	2176.3
60°	1956.3	1998.3	2037.5	2001.0	1974.6
62.5°	1758.5	1794.5	1828.4	1793.4	1768.7
65°	1558.4	1590.1	1618.1	1585.8	1559.5
67.5°	1359.4	1386.3	1412.1	1378.8	1351.4
70°	1160.5	1183.6	1207.3	1172.8	1147.6
72.5°	964.2	984.6	1005.6	972.3	950.2
75°	773.3	791.0	808.2	778.7	761.5
77.5°	591.0	606.0	617.9	599.1	582.4
80°	421.6	432.9	439.9	432.4	416.8
82.5°	271.0	279.1	282.9	282.3	272.1
85°	147.3	150.0	157.0	158.6	153.3
87.5°	57.0	60.8	62.4	67.2	61.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)