

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: P489685

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-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: P489685
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-27-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

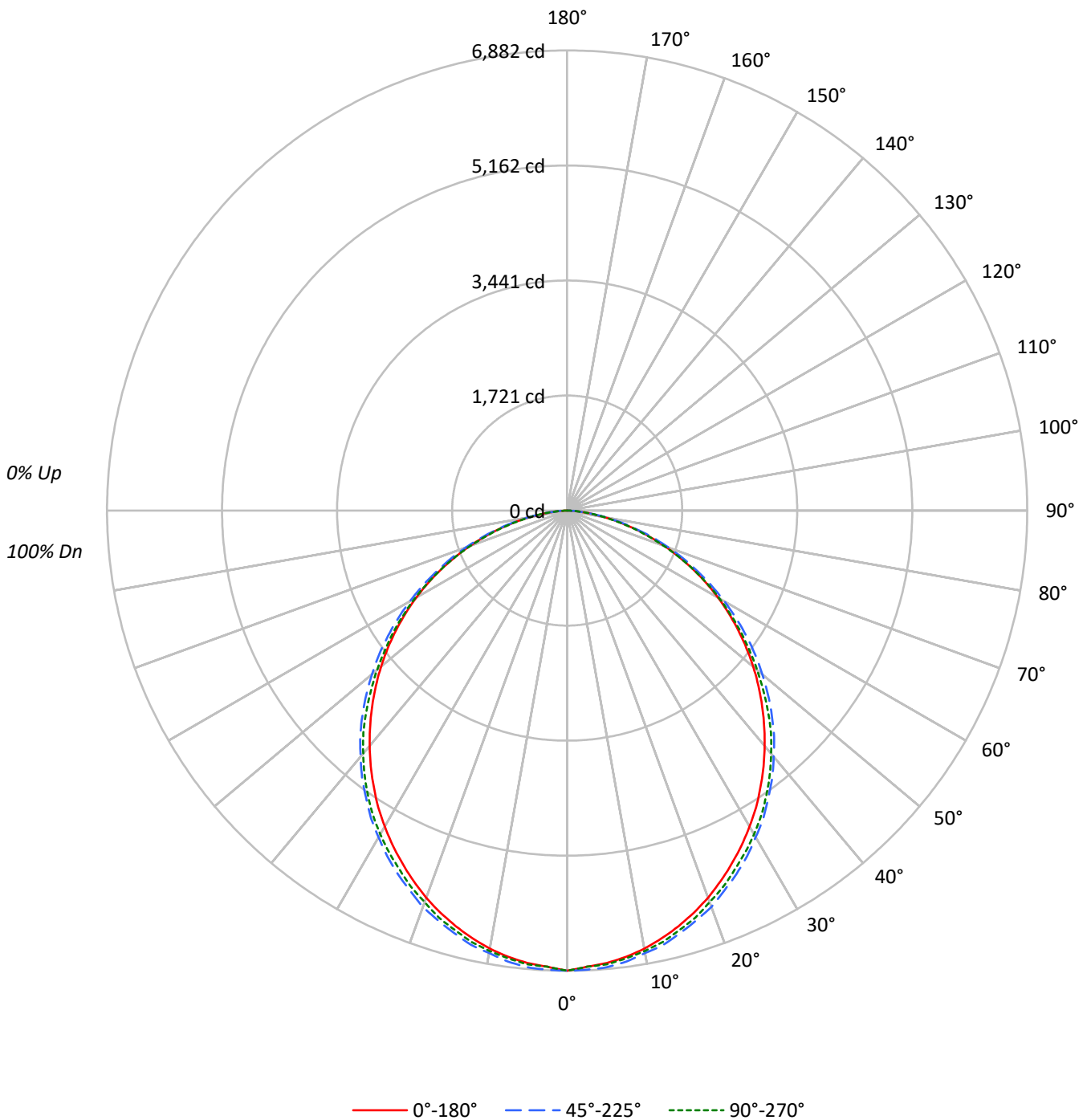
Lumens per Lamp: N/A
Luminaire Lumens: 18092.7 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	9259	9259	9259
5°	9174	9260	9203
10°	9090	9182	9138
15°	8964	9109	9045
20°	8823	9032	8924
25°	8651	8902	8800
30°	8476	8764	8683
35°	8285	8614	8534
40°	8070	8441	8334
45°	7844	8239	8084
50°	7608	7976	7767
55°	7332	7675	7439
60°	7019	7311	7085
65°	6615	6869	6620
70°	6087	6332	6019
75°	5360	5603	5278
80°	4355	4544	4306
85°	3034	3233	3154



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	648.1	3.6
10°-20°	1836.7	10.2
20°-30°	2739.3	15.1
30°-40°	3246.1	17.9
40°-50°	3284.6	18.2
50°-60°	2868.6	15.9
60°-70°	2096.2	11.6
70°-80°	1115.4	6.2
80°-90°	257.8	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°	5224.1	28.9
0°-40°	8470.2	46.8
0°-60°	14623.3	80.8
0°-90°	18092.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18092.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6882	6882	6882	6882	6882	
5°	6792	6805	6856	6872	6814	644
15°	6435	6478	6539	6578	6493	1814
25°	5827	5899	5996	6018	5928	2685
35°	5044	5123	5244	5281	5195	3154
45°	4122	4195	4330	4334	4248	3180
55°	3125	3188	3272	3224	3171	2794
65°	2078	2120	2158	2114	2079	2056
75°	1031	1055	1078	1038	1015	1096
85°	196	200	209	212	204	249
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6881.8	6881.8	6881.8	6881.8	6881.8
2.5°	6828.0	6850.3	6873.2	6883.3	6827.3
5°	6792.2	6805.1	6856.0	6871.8	6813.7
7.5°	6733.4	6752.8	6802.2	6809.4	6753.5
10°	6653.1	6687.5	6720.5	6756.3	6688.2
12.5°	6550.6	6597.2	6653.1	6659.5	6607.9
15°	6435.1	6478.1	6539.1	6578.5	6493.2
17.5°	6306.1	6347.7	6426.5	6433.7	6382.1
20°	6161.9	6213.6	6308.2	6324.7	6232.2
22.5°	5998.5	6068.0	6146.9	6162.7	6094.5
25°	5827.1	5898.8	5996.3	6018.5	5927.5
27.5°	5647.9	5716.7	5826.4	5842.2	5765.4
30°	5455.7	5520.2	5640.7	5667.2	5589.1
32.5°	5260.7	5325.2	5458.6	5480.8	5404.8
35°	5044.1	5123.0	5244.2	5280.7	5195.4
37.5°	4823.3	4900.0	5037.7	5070.7	4978.9
40°	4594.6	4670.6	4806.1	4833.3	4745.1
42.5°	4360.8	4436.8	4581.7	4586.0	4512.8
45°	4122.1	4195.2	4330.0	4333.6	4248.3
47.5°	3879.7	3953.6	4074.0	4060.4	3980.1
50°	3634.5	3704.8	3810.2	3782.9	3710.5
52.5°	3380.7	3448.8	3548.5	3504.0	3435.9
55°	3125.4	3188.5	3271.7	3224.4	3171.3
57.5°	2868.0	2931.8	2995.6	2947.6	2901.7
60°	2608.5	2664.4	2716.7	2668.0	2632.8
62.5°	2344.6	2392.6	2437.8	2391.2	2358.2
65°	2077.9	2120.2	2157.5	2114.4	2079.3
67.5°	1812.6	1848.4	1882.9	1838.4	1801.8
70°	1547.3	1578.1	1609.7	1563.8	1530.1
72.5°	1285.6	1312.8	1340.8	1296.3	1266.9
75°	1031.1	1054.7	1077.7	1038.2	1015.3
77.5°	788.0	808.1	823.8	798.7	776.5
80°	562.1	577.2	586.5	576.5	555.7
82.5°	361.4	372.1	377.1	376.4	362.8
85°	196.5	200.0	209.4	211.5	204.3
87.5°	76.0	81.0	83.2	89.6	82.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)