

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: P488680

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-35-120-EDD-90**

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: P488680
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-12-4-INS-A19156-LD4-2HI-35-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

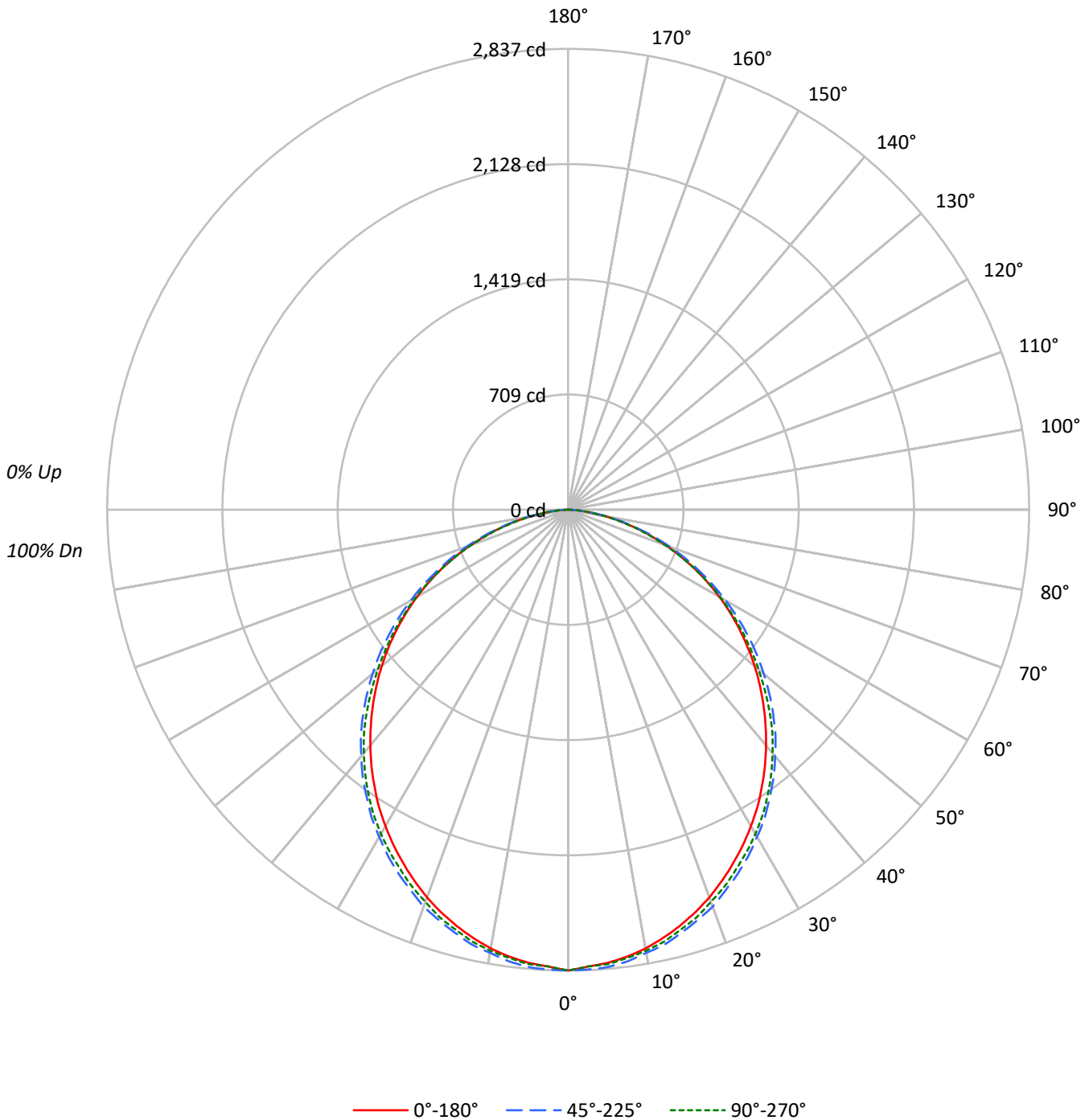
Lumens per Lamp: N/A
Luminaire Lumens: 7458.2 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	7634	7634	7634
5°	7563	7634	7587
10°	7494	7570	7533
15°	7390	7510	7457
20°	7274	7447	7357
25°	7132	7339	7255
30°	6988	7225	7159
35°	6831	7102	7036
40°	6653	6960	6871
45°	6467	6793	6664
50°	6272	6575	6403
55°	6045	6328	6133
60°	5787	6027	5841
65°	5454	5663	5457
70°	5018	5220	4962
75°	4419	4618	4351
80°	3591	3747	3550
85°	2501	2665	2600



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.2	3.6
10°-20°	757.1	10.2
20°-30°	1129.2	15.1
30°-40°	1338.1	17.9
40°-50°	1354.0	18.2
50°-60°	1182.5	15.9
60°-70°	864.1	11.6
70°-80°	459.8	6.2
80°-90°	106.3	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°	2153.5	28.9
0°-40°	3491.6	46.8
0°-60°	6028.1	80.8
0°-90°	7458.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7458.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2837	2837	2837	2837	2837	
5°	2800	2805	2826	2833	2809	265
15°	2653	2670	2696	2712	2677	748
25°	2402	2432	2472	2481	2443	1107
35°	2079	2112	2162	2177	2142	1300
45°	1699	1729	1785	1786	1751	1311
55°	1288	1314	1349	1329	1307	1152
65°	856	874	889	872	857	848
75°	425	435	444	428	418	452
85°	81	82	86	87	84	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2836.8	2836.8	2836.8	2836.8	2836.8
2.5°	2814.7	2823.8	2833.3	2837.4	2814.4
5°	2799.9	2805.2	2826.2	2832.7	2808.8
7.5°	2775.7	2783.6	2804.0	2807.0	2783.9
10°	2742.5	2756.7	2770.3	2785.1	2757.0
12.5°	2700.3	2719.5	2742.5	2745.2	2723.9
15°	2652.7	2670.4	2695.6	2711.8	2676.6
17.5°	2599.5	2616.6	2649.2	2652.1	2630.8
20°	2540.1	2561.4	2600.4	2607.2	2569.1
22.5°	2472.7	2501.4	2533.9	2540.4	2512.3
25°	2402.1	2431.6	2471.8	2481.0	2443.4
27.5°	2328.2	2356.5	2401.8	2408.3	2376.6
30°	2249.0	2275.6	2325.2	2336.1	2303.9
32.5°	2168.6	2195.2	2250.1	2259.3	2228.0
35°	2079.3	2111.8	2161.8	2176.8	2141.7
37.5°	1988.3	2019.9	2076.6	2090.2	2052.4
40°	1894.0	1925.3	1981.2	1992.4	1956.0
42.5°	1797.6	1829.0	1888.7	1890.4	1860.3
45°	1699.2	1729.4	1784.9	1786.4	1751.2
47.5°	1599.3	1629.7	1679.4	1673.8	1640.7
50°	1498.2	1527.2	1570.6	1559.4	1529.5
52.5°	1393.6	1421.7	1462.8	1444.4	1416.3
55°	1288.4	1314.4	1348.7	1329.2	1307.3
57.5°	1182.3	1208.6	1234.9	1215.1	1196.2
60°	1075.3	1098.3	1119.9	1099.8	1085.3
62.5°	966.5	986.3	1004.9	985.7	972.1
65°	856.5	874.0	889.4	871.6	857.1
67.5°	747.2	762.0	776.2	757.8	742.8
70°	637.8	650.5	663.5	644.6	630.7
72.5°	529.9	541.2	552.7	534.4	522.3
75°	425.0	434.8	444.2	428.0	418.5
77.5°	324.8	333.1	339.6	329.3	320.1
80°	231.7	237.9	241.8	237.6	229.1
82.5°	149.0	153.4	155.5	155.2	149.6
85°	81.0	82.5	86.3	87.2	84.2
87.5°	31.3	33.4	34.3	36.9	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)