

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: P488685

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-50-120-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: P488685
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-50-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

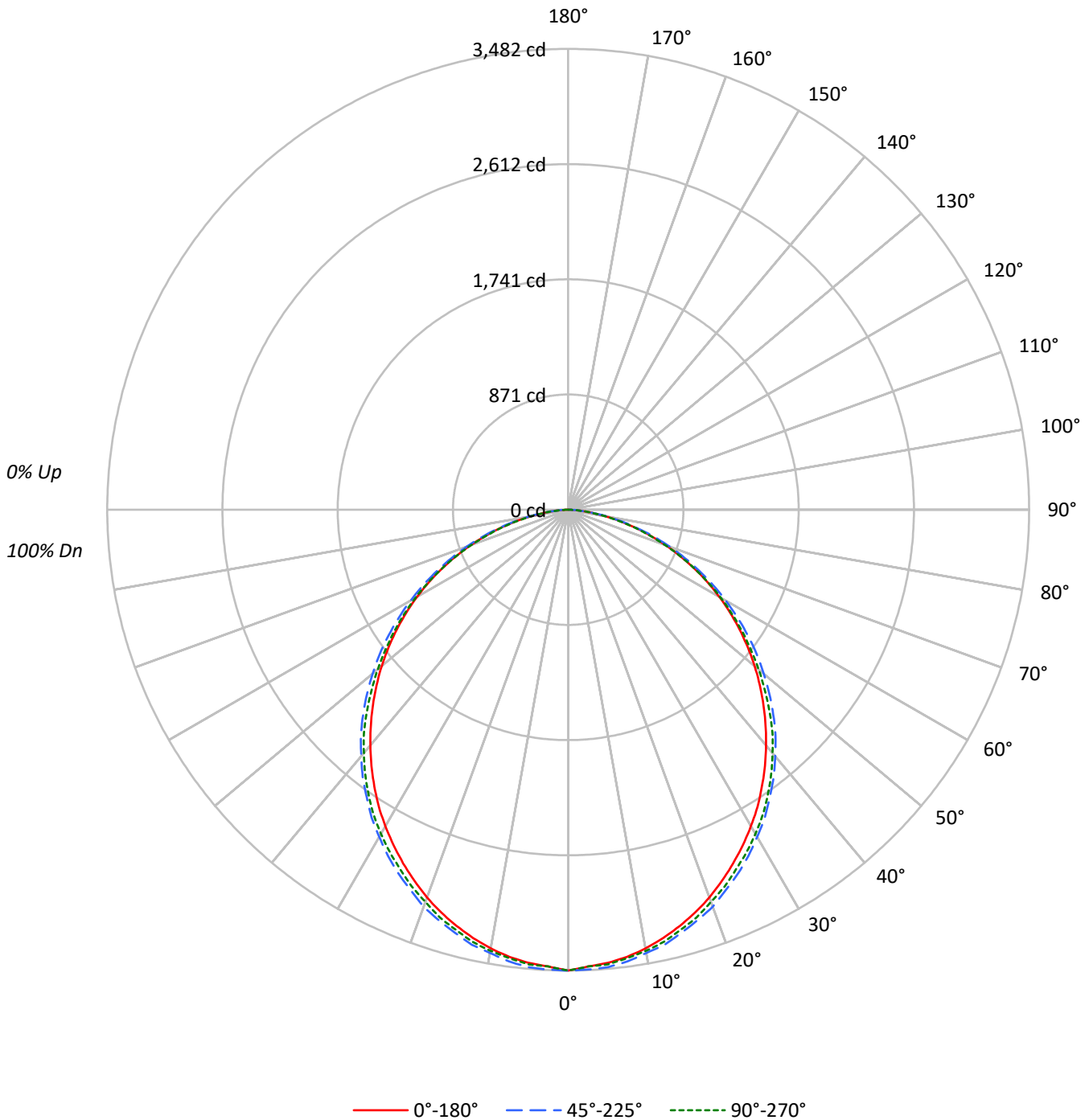
Lumens per Lamp: N/A
Luminaire Lumens: 9155.2 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9371	9371	9371
5°	9284	9371	9313
10°	9199	9292	9248
15°	9072	9218	9154
20°	8929	9141	9031
25°	8755	9009	8906
30°	8578	8869	8788
35°	8385	8717	8636
40°	8167	8543	8435
45°	7938	8338	8181
50°	7699	8071	7860
55°	7420	7767	7529
60°	7104	7399	7170
65°	6695	6951	6700
70°	6161	6408	6092
75°	5424	5670	5341
80°	4407	4599	4358
85°	3069	3270	3193



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.0	3.6
10°-20°	929.4	10.2
20°-30°	1386.1	15.1
30°-40°	1642.6	17.9
40°-50°	1662.0	18.2
50°-60°	1451.5	15.9
60°-70°	1060.7	11.6
70°-80°	564.4	6.2
80°-90°	130.4	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
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0°-30°	2643.5	28.9
0°-40°	4286.0	46.8
0°-60°	7399.6	80.8
0°-90°	9155.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9155.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3482	3482	3482	3482	3482	
5°	3437	3444	3469	3477	3448	326
15°	3256	3278	3309	3329	3286	918
25°	2949	2985	3034	3046	2999	1358
35°	2552	2592	2654	2672	2629	1596
45°	2086	2123	2191	2193	2150	1609
55°	1582	1613	1656	1632	1605	1414
65°	1051	1073	1092	1070	1052	1040
75°	522	534	545	525	514	555
85°	99	101	106	107	103	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3482.3	3482.3	3482.3	3482.3	3482.3
2.5°	3455.1	3466.3	3478.0	3483.0	3454.7
5°	3437.0	3443.5	3469.3	3477.2	3447.8
7.5°	3407.2	3417.0	3442.0	3445.7	3417.4
10°	3366.6	3384.0	3400.7	3418.8	3384.4
12.5°	3314.7	3338.3	3366.6	3369.8	3343.7
15°	3256.3	3278.0	3308.9	3328.8	3285.7
17.5°	3191.0	3212.0	3251.9	3255.6	3229.4
20°	3118.0	3144.2	3192.1	3200.4	3153.6
22.5°	3035.3	3070.5	3110.4	3118.4	3083.9
25°	2948.6	2984.9	3034.2	3045.5	2999.4
27.5°	2857.9	2892.7	2948.2	2956.2	2917.4
30°	2760.7	2793.3	2854.3	2867.7	2828.2
32.5°	2662.0	2694.6	2762.1	2773.4	2734.9
35°	2552.4	2592.3	2653.6	2672.1	2629.0
37.5°	2440.7	2479.5	2549.1	2565.8	2519.4
40°	2324.9	2363.4	2432.0	2445.7	2401.1
42.5°	2206.6	2245.1	2318.4	2320.6	2283.6
45°	2085.8	2122.8	2191.0	2192.9	2149.7
47.5°	1963.2	2000.6	2061.5	2054.6	2014.0
50°	1839.1	1874.7	1928.0	1914.2	1877.6
52.5°	1710.7	1745.1	1795.6	1773.1	1738.6
55°	1581.5	1613.4	1655.5	1631.6	1604.7
57.5°	1451.3	1483.6	1515.8	1491.5	1468.3
60°	1319.9	1348.2	1374.7	1350.0	1332.3
62.5°	1186.4	1210.7	1233.6	1210.0	1193.3
65°	1051.4	1072.8	1091.7	1069.9	1052.2
67.5°	917.2	935.3	952.8	930.3	911.8
70°	783.0	798.6	814.5	791.3	774.3
72.5°	650.5	664.3	678.5	656.0	641.1
75°	521.7	533.7	545.3	525.4	513.7
77.5°	398.7	408.9	416.9	404.2	392.9
80°	284.4	292.1	296.8	291.7	281.2
82.5°	182.9	188.3	190.8	190.5	183.6
85°	99.4	101.2	105.9	107.0	103.4
87.5°	38.5	41.0	42.1	45.4	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)