

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: P489039

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1HI-30-120-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: P489039
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-24-2-INS-A19156-LD4-1HI-30-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

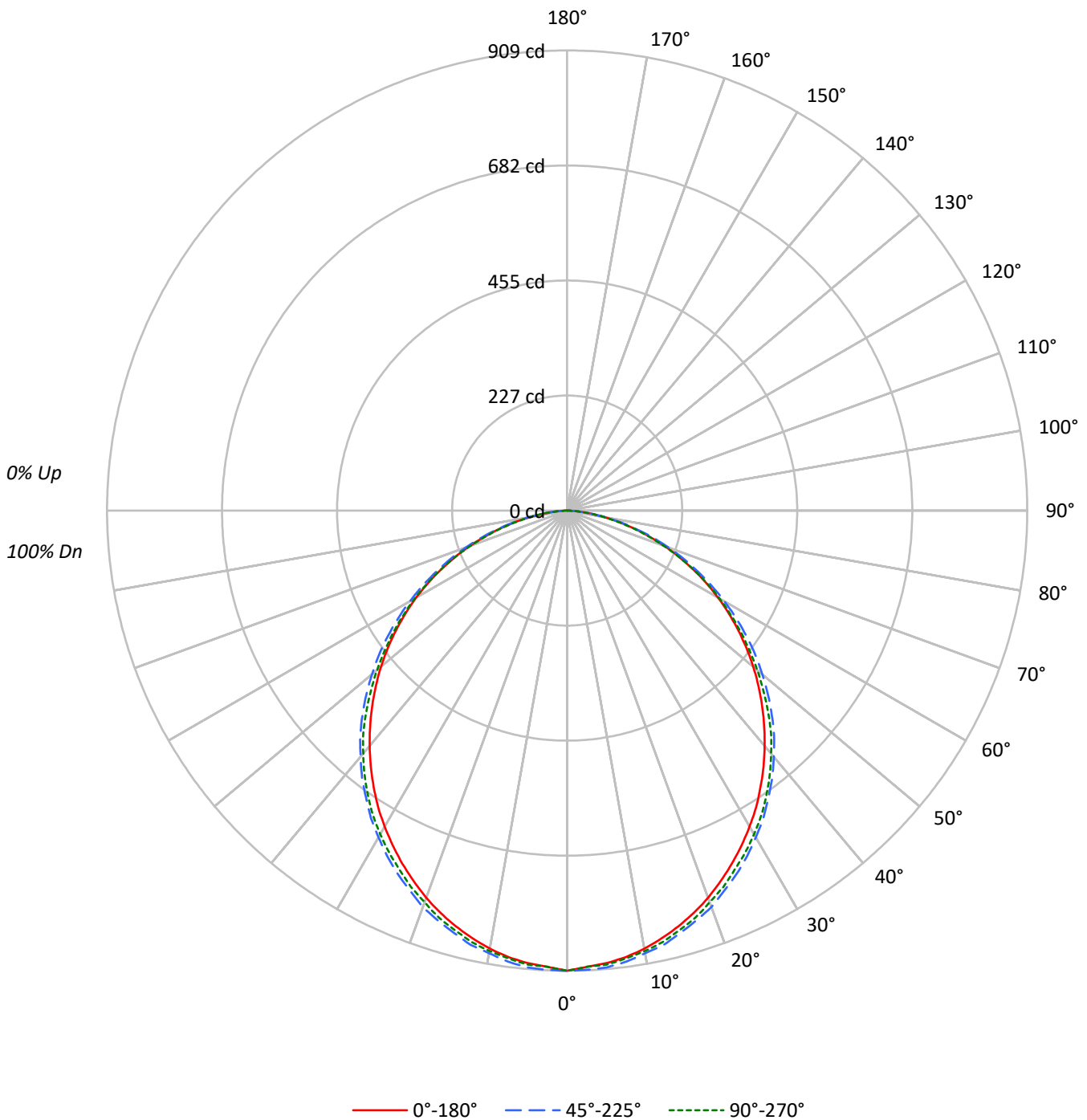
Lumens per Lamp: N/A
Luminaire Lumens: 2390.1 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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	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°	2446	2446	2446
5°	2424	2447	2431
10°	2402	2426	2414
15°	2368	2406	2390
20°	2331	2386	2358
25°	2286	2352	2325
30°	2239	2316	2294
35°	2189	2276	2255
40°	2132	2230	2202
45°	2072	2177	2136
50°	2010	2107	2052
55°	1937	2028	1965
60°	1855	1932	1872
65°	1748	1815	1749
70°	1608	1673	1590
75°	1416	1481	1394
80°	1151	1201	1137
85°	803	855	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.6	3.6
10°-20°	242.6	10.2
20°-30°	361.9	15.1
30°-40°	428.8	17.9
40°-50°	433.9	18.2
50°-60°	378.9	15.9
60°-70°	276.9	11.6
70°-80°	147.3	6.2
80°-90°	34.1	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°	690.1	28.9
0°-40°	1118.9	46.8
0°-60°	1931.8	80.8
0°-90°	2390.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2390.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	897	899	906	908	900	85
15°	850	856	864	869	858	240
25°	770	779	792	795	783	355
35°	666	677	693	698	686	417
45°	544	554	572	572	561	420
55°	413	421	432	426	419	369
65°	274	280	285	279	275	272
75°	136	139	142	137	134	145
85°	26	26	28	28	27	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	909.1	909.1	909.1	909.1	909.1
2.5°	902.0	904.9	908.0	909.3	901.9
5°	897.3	899.0	905.7	907.8	900.1
7.5°	889.5	892.1	898.6	899.5	892.2
10°	878.9	883.4	887.8	892.5	883.5
12.5°	865.3	871.5	878.9	879.7	872.9
15°	850.1	855.8	863.8	869.0	857.8
17.5°	833.0	838.5	849.0	849.9	843.1
20°	814.0	820.8	833.3	835.5	823.3
22.5°	792.4	801.6	812.0	814.1	805.1
25°	769.8	779.2	792.1	795.1	783.0
27.5°	746.1	755.2	769.7	771.8	761.6
30°	720.7	729.2	745.2	748.7	738.3
32.5°	695.0	703.5	721.1	724.0	714.0
35°	666.3	676.8	692.8	697.6	686.3
37.5°	637.2	647.3	665.5	669.8	657.7
40°	607.0	617.0	634.9	638.5	626.8
42.5°	576.1	586.1	605.3	605.8	596.2
45°	544.5	554.2	572.0	572.5	561.2
47.5°	512.5	522.3	538.2	536.4	525.8
50°	480.1	489.4	503.3	499.7	490.2
52.5°	446.6	455.6	468.8	462.9	453.9
55°	412.9	421.2	432.2	425.9	418.9
57.5°	378.9	387.3	395.7	389.4	383.3
60°	344.6	352.0	358.9	352.4	347.8
62.5°	309.7	316.1	322.0	315.9	311.5
65°	274.5	280.1	285.0	279.3	274.7
67.5°	239.4	244.2	248.7	242.9	238.0
70°	204.4	208.5	212.6	206.6	202.1
72.5°	169.8	173.4	177.1	171.3	167.4
75°	136.2	139.3	142.4	137.2	134.1
77.5°	104.1	106.7	108.8	105.5	102.6
80°	74.3	76.2	77.5	76.2	73.4
82.5°	47.7	49.2	49.8	49.7	47.9
85°	26.0	26.4	27.7	27.9	27.0
87.5°	10.0	10.7	11.0	11.8	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)