

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: P489614

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-30-120-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: P489614
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-LD4-2HI-30-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

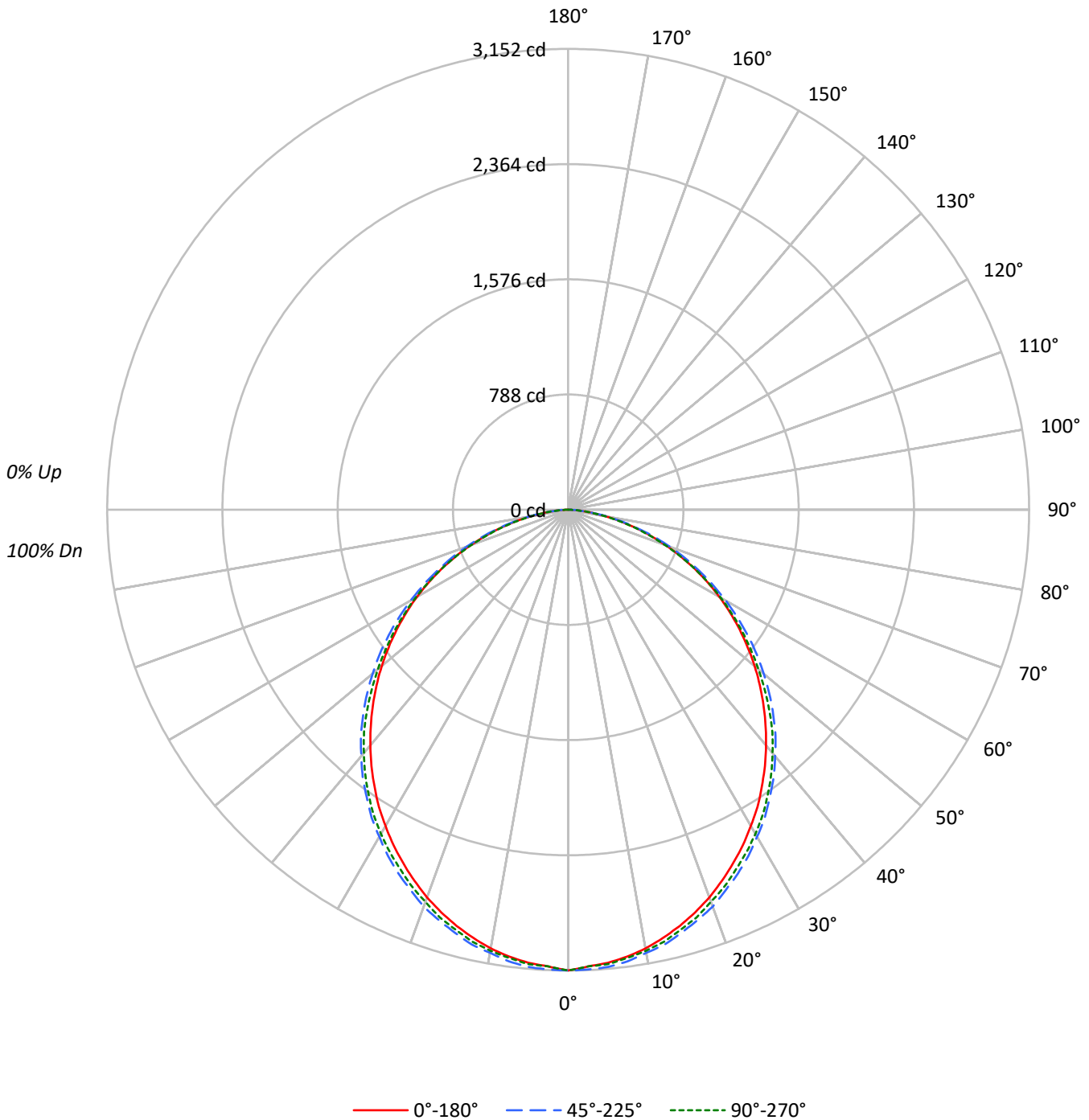
Lumens per Lamp: N/A
Luminaire Lumens: 8285.8 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4240	4240	4240
5°	4201	4241	4215
10°	4163	4205	4185
15°	4105	4171	4142
20°	4041	4136	4087
25°	3962	4077	4030
30°	3882	4013	3977
35°	3794	3945	3908
40°	3696	3866	3817
45°	3592	3773	3702
50°	3484	3652	3557
55°	3358	3515	3407
60°	3215	3348	3245
65°	3030	3145	3032
70°	2788	2900	2757
75°	2455	2565	2417
80°	1994	2081	1972
85°	1389	1480	1445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.8	3.6
10°-20°	841.1	10.2
20°-30°	1254.5	15.1
30°-40°	1486.6	17.9
40°-50°	1504.2	18.2
50°-60°	1313.7	15.9
60°-70°	960.0	11.6
70°-80°	510.8	6.2
80°-90°	118.1	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°	2392.4	28.9
0°-40°	3879.0	46.8
0°-60°	6696.9	80.8
0°-90°	8285.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8285.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3152	3152	3152	3152	3152	
5°	3111	3116	3140	3147	3120	295
15°	2947	2967	2995	3013	2974	831
25°	2669	2701	2746	2756	2715	1229
35°	2310	2346	2402	2418	2379	1445
45°	1888	1921	1983	1985	1946	1456
55°	1431	1460	1498	1477	1452	1279
65°	952	971	988	968	952	942
75°	472	483	494	476	465	502
85°	90	92	96	97	94	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3151.6	3151.6	3151.6	3151.6	3151.6
2.5°	3127.0	3137.2	3147.7	3152.3	3126.7
5°	3110.6	3116.5	3139.8	3147.0	3120.4
7.5°	3083.7	3092.5	3115.2	3118.5	3092.8
10°	3046.9	3062.6	3077.7	3094.2	3063.0
12.5°	2999.9	3021.3	3046.9	3049.8	3026.2
15°	2947.1	2966.8	2994.7	3012.7	2973.7
17.5°	2887.9	2907.0	2943.1	2946.4	2922.8
20°	2821.9	2845.6	2888.9	2896.5	2854.1
22.5°	2747.1	2778.9	2815.1	2822.3	2791.1
25°	2668.6	2701.4	2746.1	2756.3	2714.6
27.5°	2586.5	2618.0	2668.3	2675.5	2640.4
30°	2498.5	2528.1	2583.2	2595.4	2559.6
32.5°	2409.2	2438.7	2499.8	2510.0	2475.2
35°	2310.0	2346.2	2401.6	2418.4	2379.3
37.5°	2208.9	2244.0	2307.1	2322.2	2280.1
40°	2104.1	2139.0	2201.0	2213.5	2173.1
42.5°	1997.1	2031.9	2098.2	2100.2	2066.7
45°	1887.8	1921.2	1983.0	1984.6	1945.5
47.5°	1776.8	1810.6	1865.8	1859.5	1822.7
50°	1664.5	1696.6	1744.9	1732.4	1699.3
52.5°	1548.2	1579.4	1625.1	1604.7	1573.5
55°	1431.3	1460.2	1498.3	1476.6	1452.3
57.5°	1313.5	1342.7	1371.9	1349.9	1328.9
60°	1194.6	1220.2	1244.2	1221.8	1205.7
62.5°	1073.7	1095.7	1116.4	1095.1	1080.0
65°	951.6	971.0	988.0	968.3	952.3
67.5°	830.1	846.5	862.3	841.9	825.2
70°	708.6	722.7	737.2	716.2	700.7
72.5°	588.8	601.2	614.0	593.7	580.2
75°	472.2	483.0	493.5	475.5	465.0
77.5°	360.9	370.1	377.3	365.8	355.6
80°	257.4	264.3	268.6	264.0	254.5
82.5°	165.5	170.4	172.7	172.4	166.2
85°	90.0	91.6	95.9	96.9	93.6
87.5°	34.8	37.1	38.1	41.0	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)