

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: P489146

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-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: P489146  
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-LD4-4HI-30-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

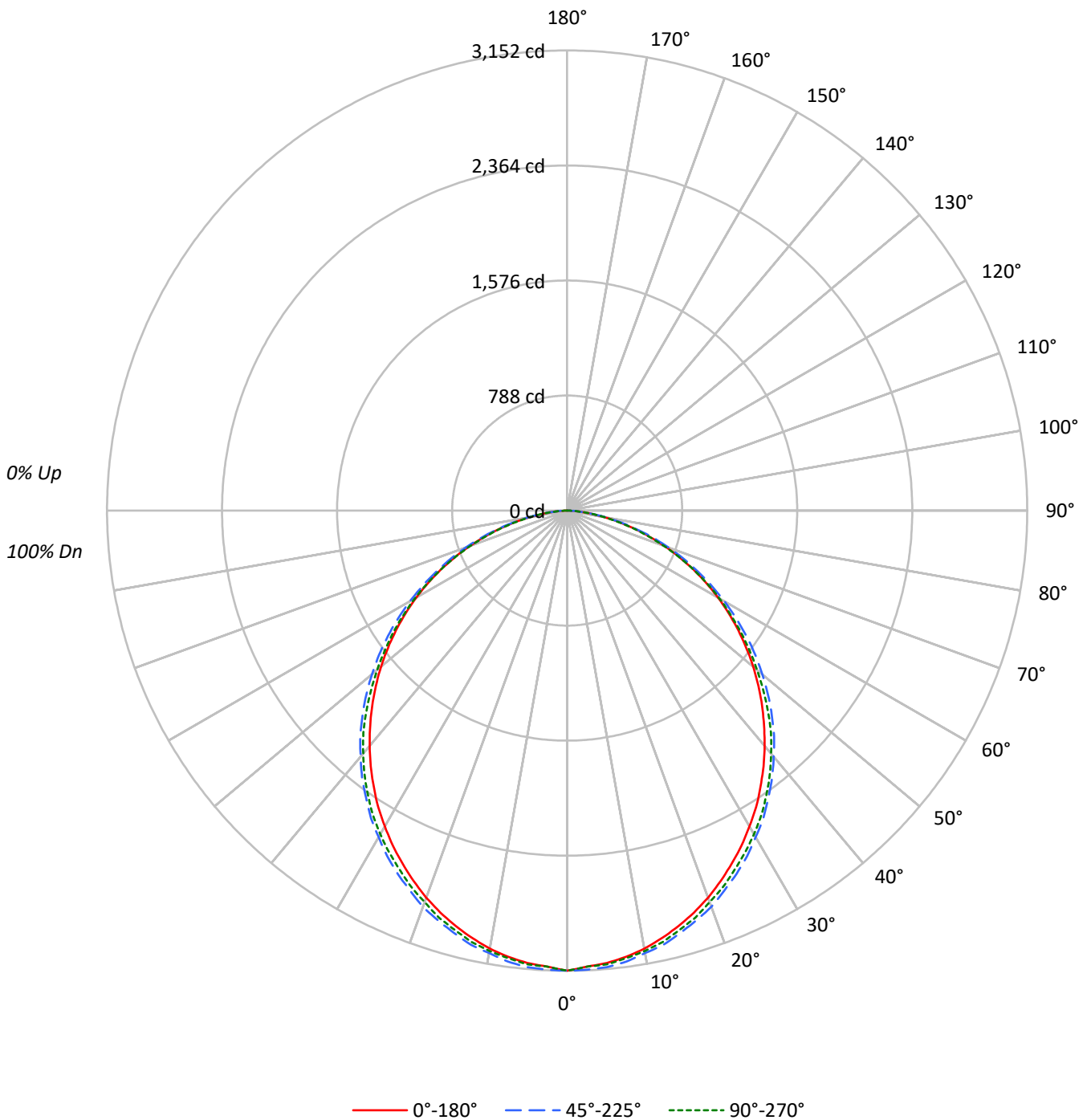
Lumens per Lamp: N/A  
Luminaire Lumens: 8285.5 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	8481	8481	8481
5°	8402	8481	8429
10°	8325	8410	8369
15°	8210	8343	8284
20°	8081	8273	8173
25°	7923	8153	8060
30°	7763	8026	7953
35°	7588	7889	7816
40°	7391	7731	7633
45°	7184	7546	7404
50°	6968	7305	7114
55°	6715	7029	6814
60°	6429	6696	6489
65°	6059	6291	6063
70°	5575	5799	5513
75°	4910	5131	4834
80°	3989	4162	3944
85°	2779	2961	2890



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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°	1486.5	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°	3878.9	46.8
0°-60°	6696.7	80.8
0°-90°	8285.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8285.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3152	3152	3152	3152	3152	
5°	3110	3116	3140	3147	3120	295
15°	2947	2967	2995	3013	2974	831
25°	2668	2701	2746	2756	2714	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°	3151.5	3151.5	3151.5	3151.5	3151.5
2.5°	3126.9	3137.1	3147.6	3152.2	3126.6
5°	3110.5	3116.4	3139.7	3146.9	3120.3
7.5°	3083.5	3092.4	3115.1	3118.3	3092.7
10°	3046.8	3062.5	3077.6	3094.0	3062.9
12.5°	2999.8	3021.2	3046.8	3049.7	3026.1
15°	2946.9	2966.6	2994.6	3012.6	2973.5
17.5°	2887.8	2906.9	2943.0	2946.3	2922.6
20°	2821.8	2845.5	2888.8	2896.4	2854.0
22.5°	2747.0	2778.8	2814.9	2822.2	2791.0
25°	2668.5	2701.3	2746.0	2756.2	2714.5
27.5°	2586.4	2617.9	2668.2	2675.4	2640.3
30°	2498.4	2528.0	2583.1	2595.3	2559.5
32.5°	2409.1	2438.7	2499.7	2509.9	2475.1
35°	2309.9	2346.1	2401.6	2418.3	2379.2
37.5°	2208.8	2243.9	2307.0	2322.1	2280.1
40°	2104.1	2138.9	2200.9	2213.4	2173.0
42.5°	1997.0	2031.8	2098.2	2100.1	2066.6
45°	1887.7	1921.2	1982.9	1984.6	1945.5
47.5°	1776.7	1810.5	1865.7	1859.4	1822.7
50°	1664.4	1696.6	1744.9	1732.4	1699.2
52.5°	1548.2	1579.4	1625.0	1604.6	1573.5
55°	1431.3	1460.2	1498.3	1476.6	1452.3
57.5°	1313.4	1342.6	1371.8	1349.8	1328.8
60°	1194.5	1220.2	1244.1	1221.8	1205.7
62.5°	1073.7	1095.7	1116.4	1095.0	1079.9
65°	951.6	970.9	988.0	968.3	952.2
67.5°	830.1	846.5	862.2	841.9	825.1
70°	708.6	722.7	737.1	716.1	700.7
72.5°	588.7	601.2	614.0	593.7	580.2
75°	472.2	483.0	493.5	475.5	464.9
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	166.1
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)