

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: P488720

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3HI-50-120-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: P488720  
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-LD4-3HI-50-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

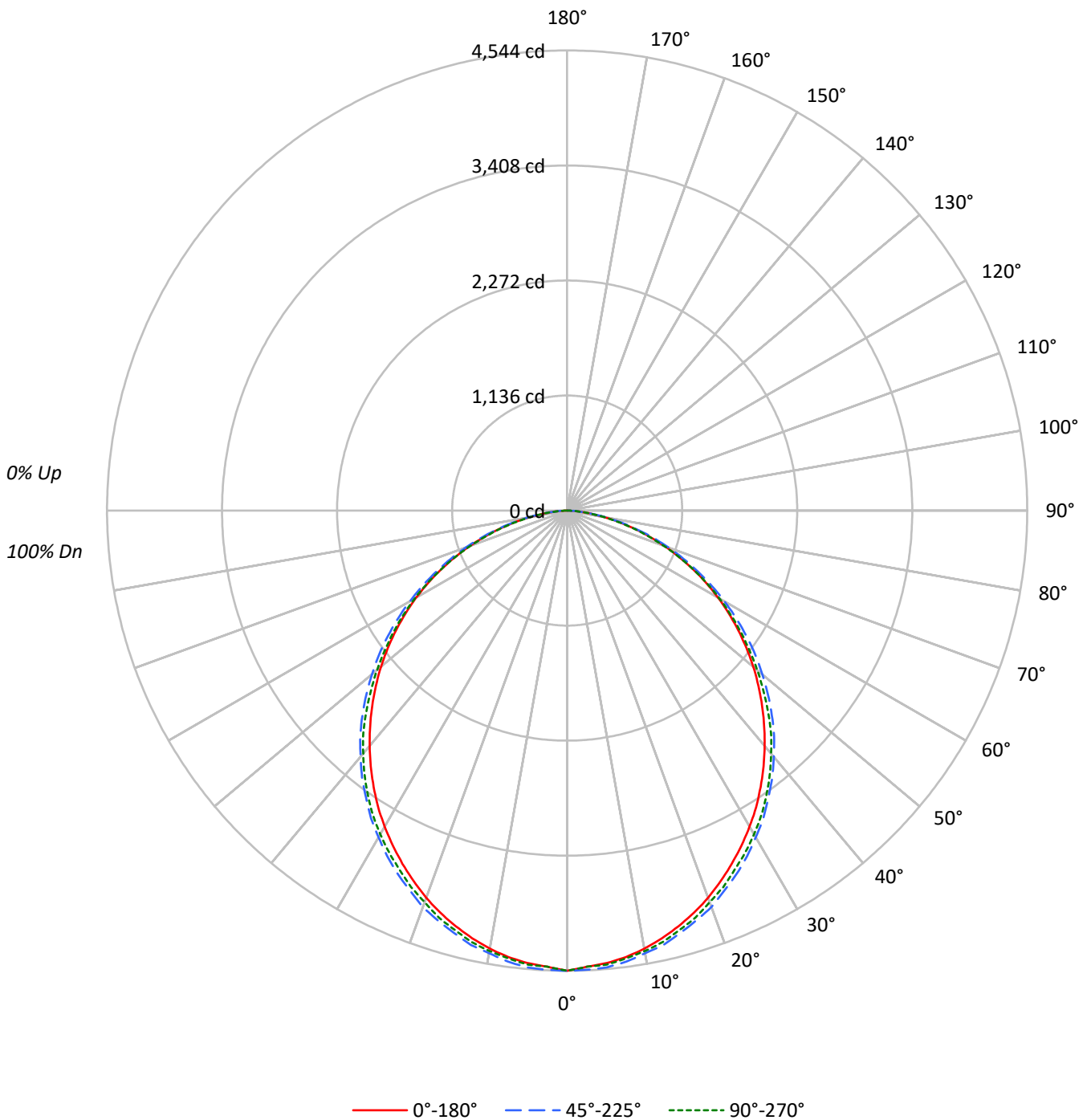
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11947.6 lumens  
Efficiency: N/A  
Efficacy: 92.2 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): 129.6  
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	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°	12229	12229	12229
5°	12116	12230	12154
10°	12005	12127	12068
15°	11839	12030	11945
20°	11653	11929	11785
25°	11425	11757	11622
30°	11195	11574	11468
35°	10942	11376	11270
40°	10658	11149	11007
45°	10359	10881	10676
50°	10048	10533	10258
55°	9683	10136	9825
60°	9270	9655	9357
65°	8737	9072	8743
70°	8039	8364	7950
75°	7079	7399	6970
80°	5752	6002	5686
85°	4005	4270	4165



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	428.0	3.6
10°-20°	1212.9	10.2
20°-30°	1808.9	15.1
30°-40°	2143.6	17.9
40°-50°	2169.0	18.2
50°-60°	1894.3	15.9
60°-70°	1384.3	11.6
70°-80°	736.5	6.2
80°-90°	170.2	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°	3449.8	28.9
0°-40°	5593.3	46.8
0°-60°	9656.6	80.8
0°-90°	11947.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11947.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4544	4544	4544	4544	4544	
5°	4485	4494	4527	4538	4500	425
15°	4250	4278	4318	4344	4288	1198
25°	3848	3895	3960	3974	3914	1773
35°	3331	3383	3463	3487	3431	2083
45°	2722	2770	2859	2862	2805	2100
55°	2064	2106	2160	2129	2094	1845
65°	1372	1400	1425	1396	1373	1358
75°	681	696	712	686	670	724
85°	130	132	138	140	135	164
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4544.4	4544.4	4544.4	4544.4	4544.4
2.5°	4508.9	4523.6	4538.8	4545.4	4508.5
5°	4485.3	4493.8	4527.4	4537.8	4499.5
7.5°	4446.4	4459.2	4491.9	4496.6	4459.7
10°	4393.4	4416.1	4437.9	4461.6	4416.6
12.5°	4325.7	4356.5	4393.4	4397.7	4363.6
15°	4249.5	4277.9	4318.1	4344.2	4287.8
17.5°	4164.2	4191.7	4243.8	4248.5	4214.4
20°	4069.1	4103.2	4165.7	4176.5	4115.5
22.5°	3961.1	4007.0	4059.1	4069.5	4024.6
25°	3848.0	3895.3	3959.7	3974.4	3914.2
27.5°	3729.6	3775.0	3847.5	3857.9	3807.2
30°	3602.7	3645.3	3724.9	3742.4	3690.8
32.5°	3473.9	3516.5	3604.6	3619.3	3569.1
35°	3330.9	3383.0	3463.0	3487.2	3430.8
37.5°	3185.1	3235.7	3326.7	3348.4	3287.8
40°	3034.0	3084.2	3173.7	3191.7	3133.5
42.5°	2879.7	2929.9	3025.5	3028.4	2980.1
45°	2722.0	2770.3	2859.3	2861.7	2805.4
47.5°	2562.0	2610.8	2690.3	2681.3	2628.3
50°	2400.1	2446.5	2516.1	2498.1	2450.2
52.5°	2232.4	2277.4	2343.2	2313.9	2268.9
55°	2063.9	2105.6	2160.5	2129.2	2094.2
57.5°	1893.9	1936.1	1978.2	1946.5	1916.2
60°	1722.5	1759.4	1794.0	1761.8	1738.6
62.5°	1548.3	1580.0	1609.8	1579.0	1557.3
65°	1372.1	1400.1	1424.7	1396.3	1373.1
67.5°	1197.0	1220.6	1243.4	1214.0	1189.9
70°	1021.8	1042.1	1063.0	1032.7	1010.4
72.5°	848.9	866.9	885.4	856.0	836.6
75°	680.9	696.5	711.6	685.6	670.4
77.5°	520.4	533.6	544.0	527.5	512.8
80°	371.2	381.1	387.3	380.7	366.9
82.5°	238.6	245.7	249.0	248.6	239.6
85°	129.7	132.1	138.3	139.7	134.9
87.5°	50.2	53.5	54.9	59.2	54.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)