

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: P489590

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-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: P489590  
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-LD4-1LO-30-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

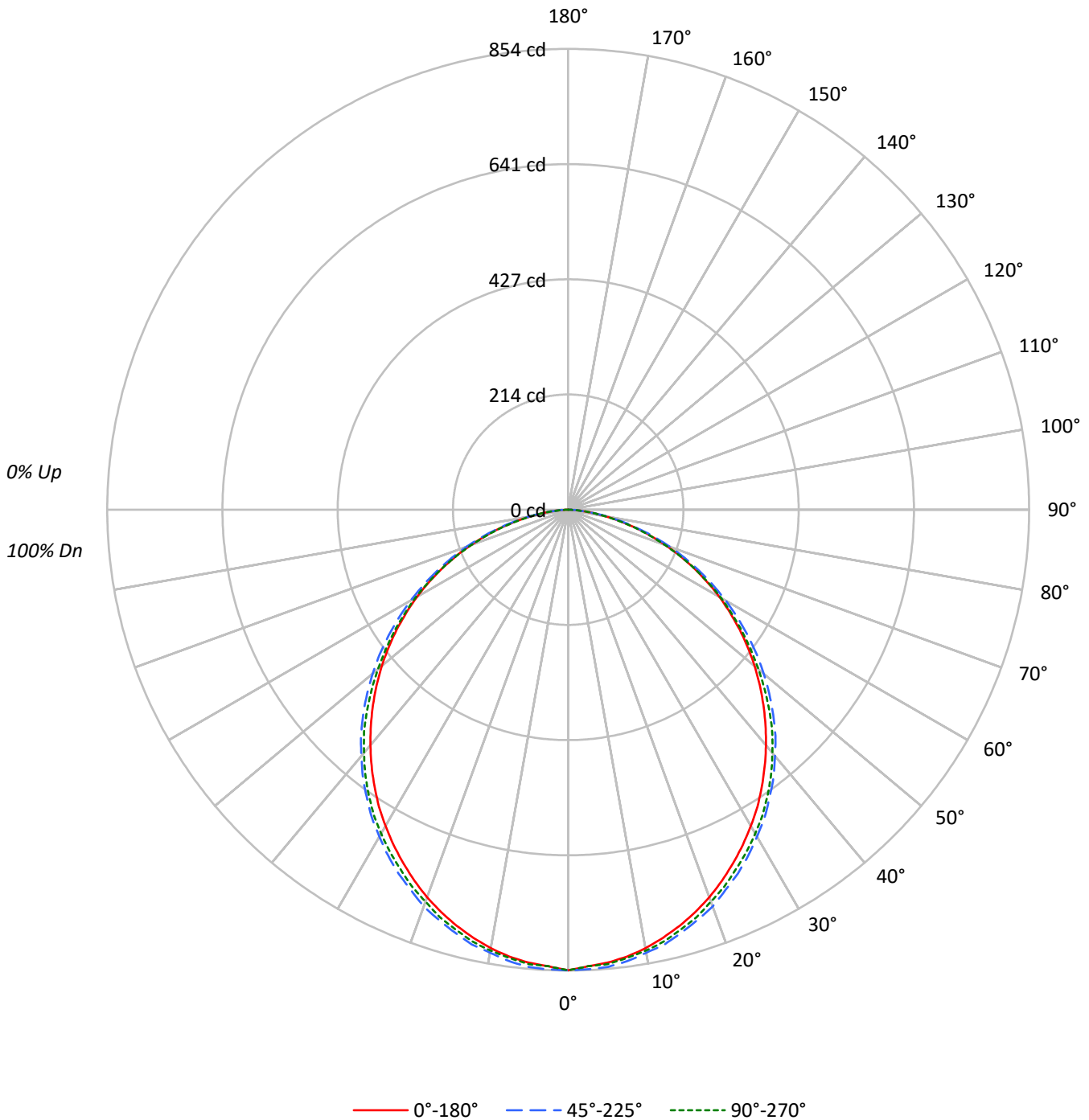
Lumens per Lamp: N/A  
Luminaire Lumens: 2244.1 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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	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°	1149	1149	1149
5°	1138	1149	1141
10°	1127	1139	1133
15°	1112	1130	1122
20°	1094	1120	1107
25°	1073	1104	1091
30°	1051	1087	1077
35°	1028	1068	1058
40°	1001	1047	1034
45°	973	1022	1003
50°	944	989	963
55°	909	952	923
60°	871	907	879
65°	820	852	821
70°	755	786	747
75°	665	695	655
80°	540	563	534
85°	377	401	391



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.4	3.6
10°-20°	227.8	10.2
20°-30°	339.8	15.1
30°-40°	402.6	17.9
40°-50°	407.4	18.2
50°-60°	355.8	15.9
60°-70°	260.0	11.6
70°-80°	138.3	6.2
80°-90°	32.0	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°	648.0	28.9
0°-40°	1050.6	46.8
0°-60°	1813.8	80.8
0°-90°	2244.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2244.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	842	844	850	852	845	80
15°	798	804	811	816	805	225
25°	723	732	744	746	735	333
35°	626	635	650	655	644	391
45°	511	520	537	538	527	394
55°	388	396	406	400	393	347
65°	258	263	268	262	258	255
75°	128	131	134	129	126	136
85°	24	25	26	26	25	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	853.6	853.6	853.6	853.6	853.6
2.5°	846.9	849.7	852.5	853.8	846.8
5°	842.5	844.1	850.4	852.3	845.1
7.5°	835.2	837.6	843.7	844.6	837.7
10°	825.2	829.5	833.6	838.0	829.6
12.5°	812.5	818.3	825.2	826.0	819.6
15°	798.2	803.5	811.1	816.0	805.4
17.5°	782.2	787.3	797.1	798.0	791.6
20°	764.3	770.7	782.4	784.5	773.0
22.5°	744.0	752.6	762.4	764.4	755.9
25°	722.8	731.6	743.7	746.5	735.2
27.5°	700.5	709.1	722.7	724.6	715.1
30°	676.7	684.7	699.6	702.9	693.2
32.5°	652.5	660.5	677.0	679.8	670.4
35°	625.6	635.4	650.5	655.0	644.4
37.5°	598.3	607.8	624.8	628.9	617.5
40°	569.9	579.3	596.1	599.5	588.6
42.5°	540.9	550.3	568.3	568.8	559.7
45°	511.3	520.3	537.1	537.5	526.9
47.5°	481.2	490.4	505.3	503.6	493.7
50°	450.8	459.5	472.6	469.2	460.2
52.5°	419.3	427.8	440.1	434.6	426.2
55°	387.7	395.5	405.8	399.9	393.3
57.5°	355.7	363.6	371.6	365.6	359.9
60°	323.5	330.5	337.0	330.9	326.6
62.5°	290.8	296.8	302.4	296.6	292.5
65°	257.7	263.0	267.6	262.3	257.9
67.5°	224.8	229.3	233.5	228.0	223.5
70°	191.9	195.7	199.7	194.0	189.8
72.5°	159.5	162.8	166.3	160.8	157.1
75°	127.9	130.8	133.7	128.8	125.9
77.5°	97.7	100.2	102.2	99.1	96.3
80°	69.7	71.6	72.7	71.5	68.9
82.5°	44.8	46.2	46.8	46.7	45.0
85°	24.4	24.8	26.0	26.2	25.3
87.5°	9.4	10.0	10.3	11.1	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)