

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: P489067

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1STD-40-120-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: P489067  
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-LD4-1STD-40-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

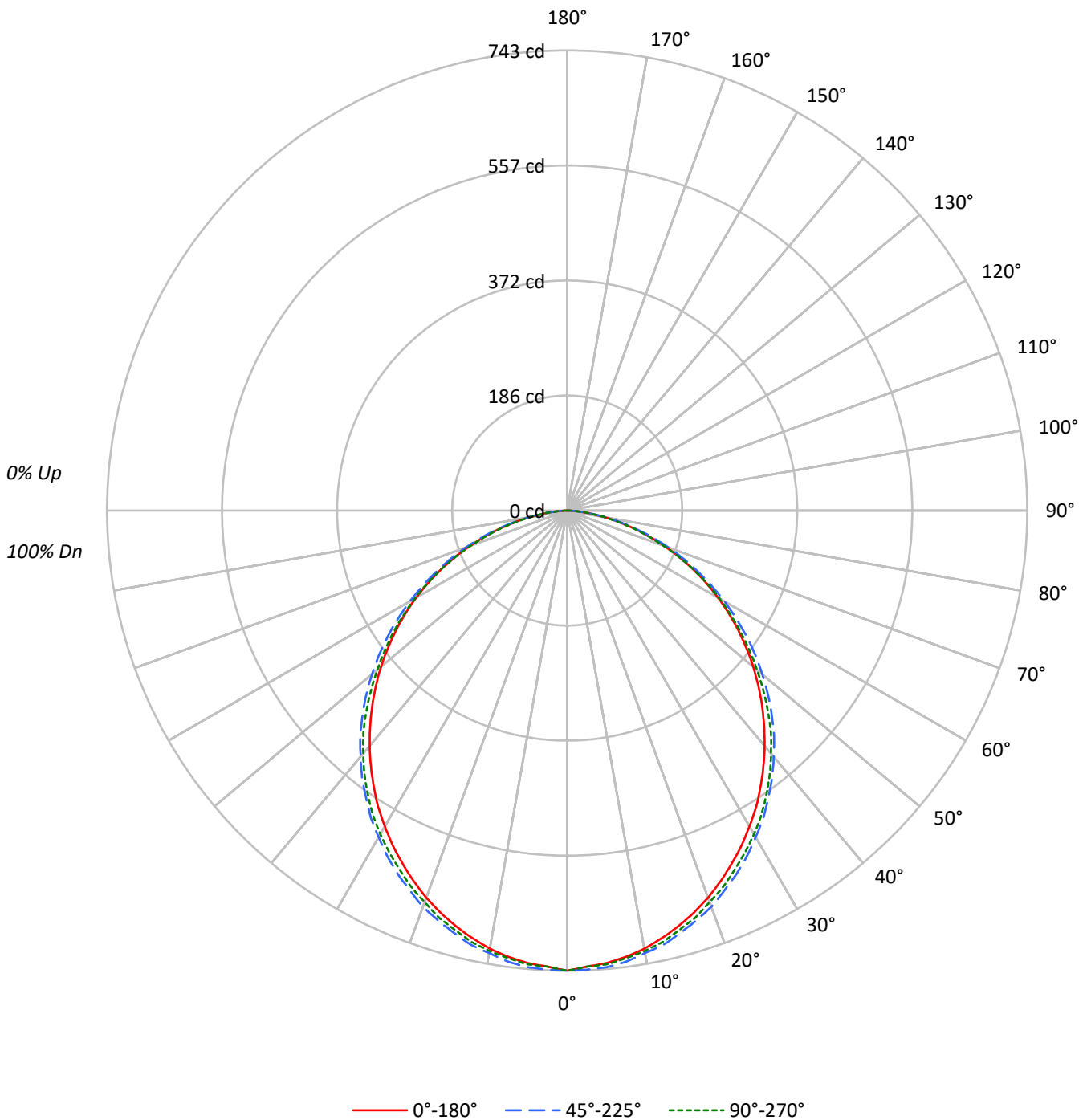
Lumens per Lamp: N/A  
Luminaire Lumens: 1953.0 lumens  
Efficiency: N/A  
Efficacy: 117.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1999	1999	1999
5°	1981	1999	1987
10°	1962	1982	1973
15°	1935	1967	1953
20°	1905	1950	1926
25°	1868	1922	1900
30°	1830	1892	1875
35°	1789	1860	1842
40°	1742	1822	1799
45°	1694	1779	1745
50°	1642	1722	1677
55°	1583	1657	1606
60°	1516	1579	1530
65°	1428	1483	1429
70°	1314	1367	1300
75°	1157	1209	1140
80°	941	981	930
85°	655	698	682



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.0	3.6
10°-20°	198.3	10.2
20°-30°	295.7	15.1
30°-40°	350.4	17.9
40°-50°	354.5	18.2
50°-60°	309.7	15.9
60°-70°	226.3	11.6
70°-80°	120.4	6.2
80°-90°	27.8	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°	563.9	28.9
0°-40°	914.3	46.8
0°-60°	1578.5	80.8
0°-90°	1953.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1953.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	733	735	740	742	736	70
15°	695	699	706	710	701	196
25°	629	637	647	650	640	290
35°	544	553	566	570	561	341
45°	445	453	467	468	459	343
55°	337	344	353	348	342	302
65°	224	229	233	228	224	222
75°	111	114	116	112	110	118
85°	21	22	23	23	22	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	742.9	742.9	742.9	742.9	742.9
2.5°	737.0	739.4	741.9	743.0	737.0
5°	733.2	734.6	740.1	741.8	735.5
7.5°	726.8	728.9	734.3	735.0	729.0
10°	718.2	721.9	725.4	729.3	722.0
12.5°	707.1	712.1	718.2	718.9	713.3
15°	694.6	699.3	705.9	710.1	700.9
17.5°	680.7	685.2	693.7	694.5	688.9
20°	665.1	670.7	680.9	682.7	672.7
22.5°	647.5	655.0	663.5	665.2	657.9
25°	629.0	636.7	647.3	649.7	639.8
27.5°	609.7	617.1	628.9	630.6	622.3
30°	588.9	595.9	608.9	611.7	603.3
32.5°	567.9	574.8	589.2	591.6	583.4
35°	544.5	553.0	566.1	570.0	560.8
37.5°	520.6	528.9	543.8	547.3	537.4
40°	496.0	504.2	518.8	521.7	512.2
42.5°	470.7	478.9	494.6	495.0	487.1
45°	445.0	452.8	467.4	467.8	458.6
47.5°	418.8	426.8	439.8	438.3	429.6
50°	392.3	399.9	411.3	408.3	400.5
52.5°	364.9	372.3	383.0	378.2	370.9
55°	337.4	344.2	353.2	348.1	342.3
57.5°	309.6	316.5	323.4	318.2	313.2
60°	281.6	287.6	293.3	288.0	284.2
62.5°	253.1	258.3	263.1	258.1	254.6
65°	224.3	228.9	232.9	228.2	224.4
67.5°	195.7	199.5	203.2	198.4	194.5
70°	167.0	170.3	173.8	168.8	165.2
72.5°	138.8	141.7	144.7	139.9	136.8
75°	111.3	113.9	116.3	112.1	109.6
77.5°	85.1	87.2	88.9	86.2	83.8
80°	60.7	62.3	63.3	62.2	60.0
82.5°	39.0	40.2	40.7	40.6	39.2
85°	21.2	21.6	22.6	22.8	22.1
87.5°	8.2	8.7	9.0	9.7	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)