

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: METALUX

Report Number: P388248

Luminaire Tested: **22CZ2-90VHE-SQR-UNV-L930-CD1-SDWPD1-U**

Issue Date: 2/28/2020

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: P388248  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-90VHE-SQR-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7054.7 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

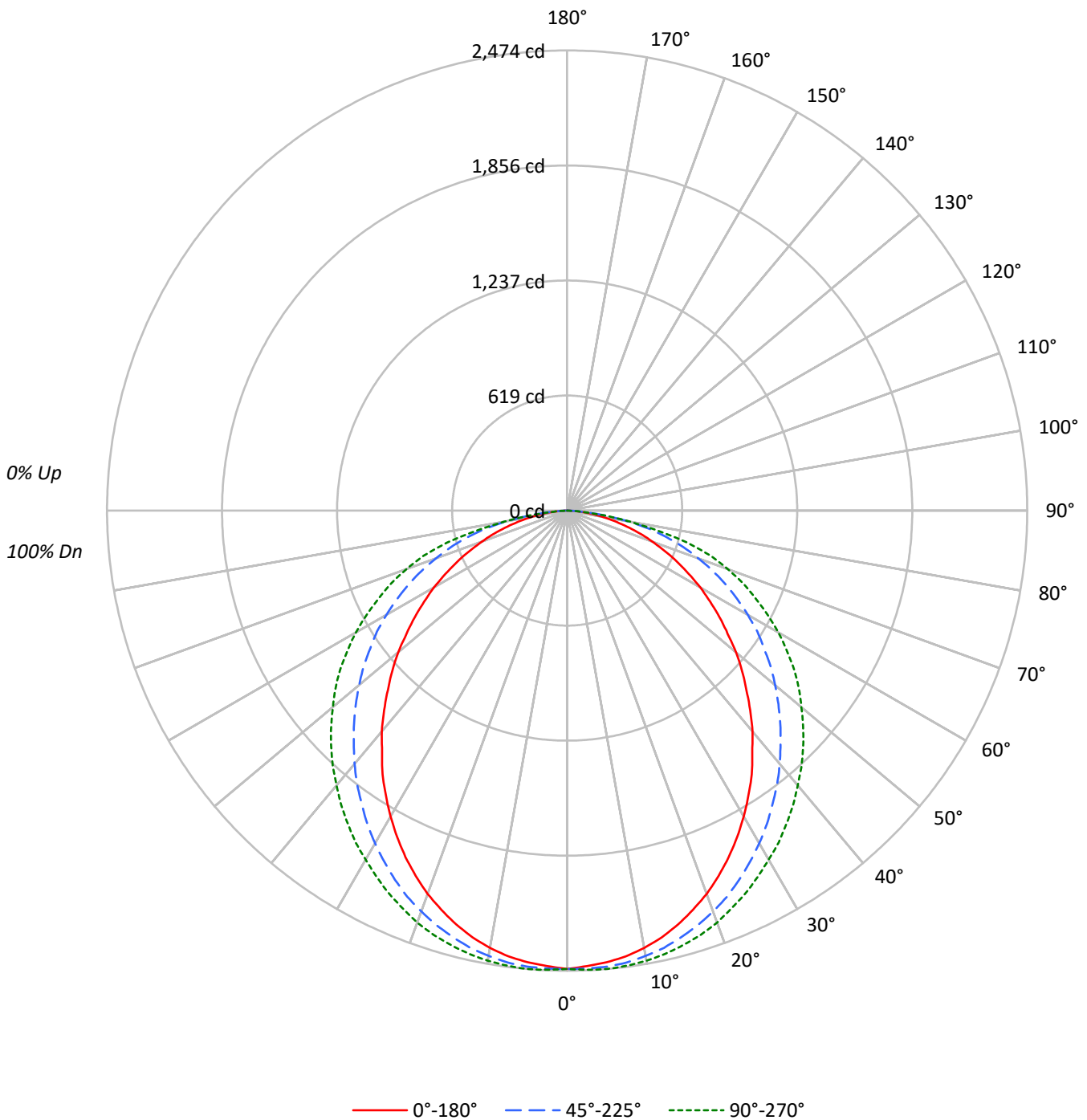
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	6632	6632	6632
5°	6585	6648	6684
10°	6524	6642	6716
15°	6418	6614	6735
20°	6281	6568	6750
25°	6104	6502	6741
30°	5899	6419	6732
35°	5687	6325	6754
40°	5446	6246	6775
45°	5186	6167	6830
50°	4962	6112	6882
55°	4697	6064	6990
60°	4451	6037	7064
65°	4157	5991	7121
70°	3820	5901	7218
75°	3447	5744	6963
80°	2958	5084	5241
85°	2377	2998	2377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	233.6	3.3
10°-20°	668.0	9.5
20°-30°	1003.2	14.2
30°-40°	1196.5	17.0
40°-50°	1237.1	17.5
50°-60°	1137.4	16.1
60°-70°	905.4	12.8
70°-80°	553.2	7.8
80°-90°	120.2	1.7
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°	1904.8	27.0
0°-40°	3101.4	44.0
0°-60°	5475.8	77.6
0°-90°	7054.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7054.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2464	2464	2464	2464	2464	
5°	2438	2444	2461	2471	2474	231
15°	2304	2330	2374	2408	2418	649
25°	2056	2106	2190	2250	2270	946
35°	1731	1805	1925	2026	2056	1080
45°	1363	1460	1621	1751	1795	1054
55°	1001	1112	1292	1440	1490	896
65°	653	763	941	1072	1118	647
75°	332	429	552	650	670	353
85°	77	94	97	84	77	89
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2464.4	2464.4	2464.4	2464.4	2464.4
2.5°	2451.0	2454.3	2464.4	2471.1	2471.1
5°	2437.6	2444.3	2461.0	2471.1	2474.4
7.5°	2417.5	2427.5	2451.0	2464.4	2467.7
10°	2387.4	2400.8	2430.9	2451.0	2457.7
12.5°	2350.5	2370.6	2407.5	2434.2	2440.9
15°	2303.7	2330.4	2374.0	2407.5	2417.5
17.5°	2250.1	2283.6	2337.1	2377.3	2390.7
20°	2193.2	2226.6	2293.6	2340.5	2357.2
22.5°	2126.2	2169.7	2246.7	2300.3	2313.7
25°	2055.9	2106.1	2189.8	2250.1	2270.2
27.5°	1978.9	2039.1	2129.5	2203.2	2219.9
30°	1898.5	1962.1	2065.9	2146.3	2166.4
32.5°	1814.8	1888.5	1999.0	2089.4	2116.1
35°	1731.1	1804.8	1925.3	2025.7	2055.9
37.5°	1634.0	1721.0	1855.0	1958.8	1995.6
40°	1550.3	1634.0	1778.0	1891.8	1928.6
42.5°	1456.5	1546.9	1697.6	1821.5	1865.0
45°	1362.8	1459.9	1620.6	1751.2	1794.7
47.5°	1275.7	1372.8	1540.2	1677.5	1721.0
50°	1185.3	1285.8	1459.9	1600.5	1644.0
52.5°	1088.2	1198.7	1379.5	1520.1	1570.4
55°	1001.2	1111.6	1292.5	1439.8	1490.0
57.5°	910.7	1024.6	1212.1	1352.7	1399.6
60°	827.0	937.5	1121.7	1259.0	1312.5
62.5°	736.6	850.5	1031.3	1165.2	1215.4
65°	652.9	763.4	940.9	1071.5	1118.3
67.5°	569.2	679.7	847.1	971.0	1024.6
70°	485.5	596.0	750.0	870.6	917.4
72.5°	411.8	508.9	656.3	766.8	810.3
75°	331.5	428.6	552.5	649.6	669.7
77.5°	257.8	344.9	448.7	492.2	498.9
80°	190.9	257.8	328.1	338.2	338.2
82.5°	127.2	177.5	204.2	207.6	204.2
85°	77.0	93.8	97.1	83.7	77.0
87.5°	26.8	26.8	16.7	10.0	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)