

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: P388156

Luminaire Tested: **22CZ2-70VHE-SQR-UNV-L935-CD1-SWPD1-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: P388156  
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: 22CZ2-70VHE-SQR-UNV-L935-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5627.0 lumens  
Efficiency: N/A  
Efficacy: 111.9 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

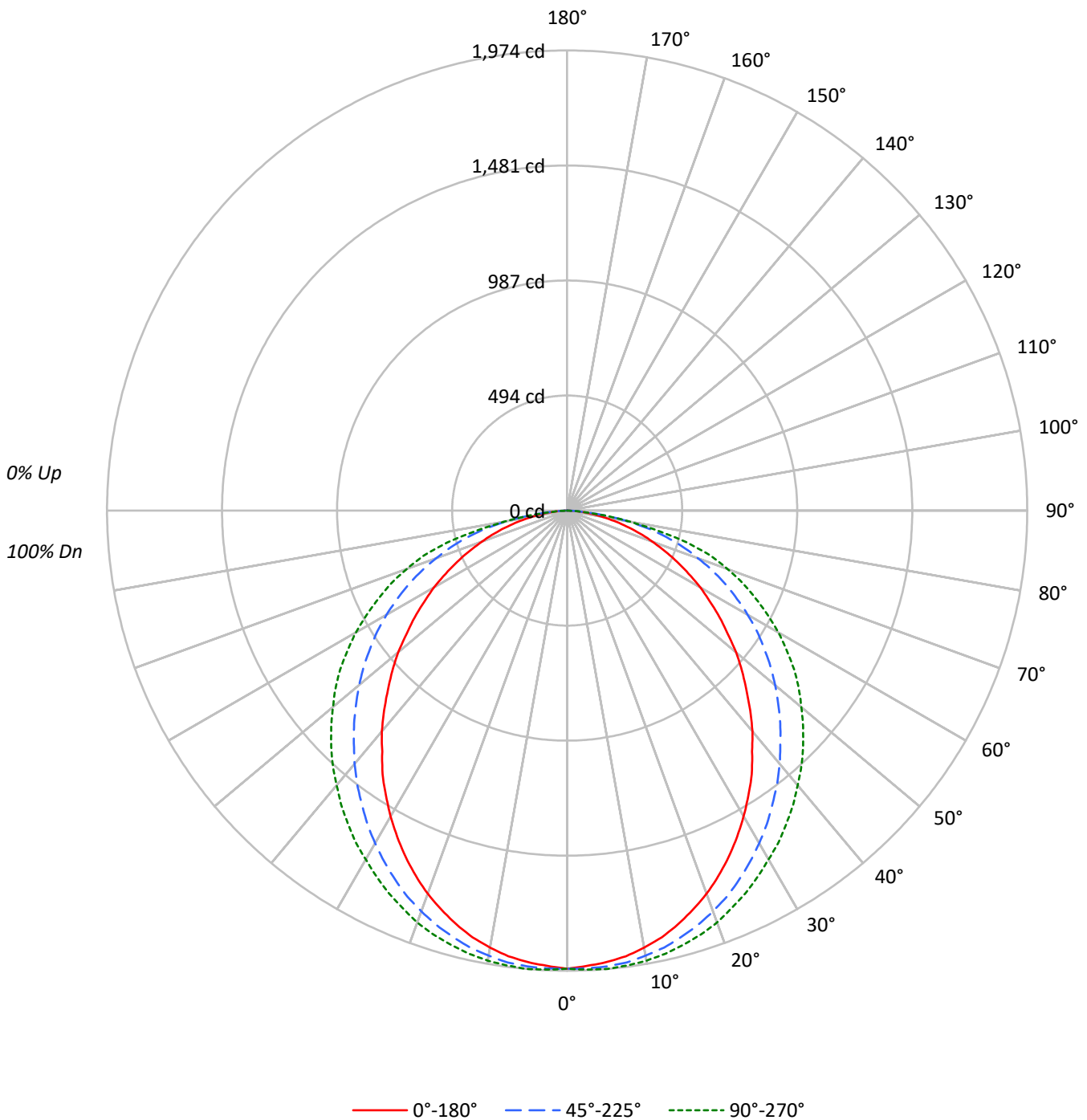
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5289	5289	5289
5°	5252	5303	5331
10°	5203	5298	5357
15°	5119	5275	5372
20°	5009	5239	5384
25°	4869	5186	5376
30°	4705	5120	5369
35°	4536	5045	5387
40°	4344	4982	5404
45°	4137	4919	5448
50°	3958	4875	5490
55°	3746	4837	5576
60°	3550	4815	5634
65°	3316	4779	5680
70°	3047	4707	5758
75°	2749	4582	5553
80°	2359	4055	4179
85°	1896	2393	1896



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	186.3	3.3
10°-20°	532.8	9.5
20°-30°	800.2	14.2
30°-40°	954.4	17.0
40°-50°	986.7	17.5
50°-60°	907.2	16.1
60°-70°	722.2	12.8
70°-80°	441.2	7.8
80°-90°	95.9	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°	1519.3	27.0
0°-40°	2473.7	44.0
0°-60°	4367.6	77.6
0°-90°	5627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5627.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1966	1966	1966	1966	1966	
5°	1944	1950	1963	1971	1974	184
15°	1838	1859	1894	1920	1928	517
25°	1640	1680	1747	1795	1811	754
35°	1381	1440	1536	1616	1640	861
45°	1087	1164	1293	1397	1432	841
55°	798	887	1031	1148	1188	714
65°	521	609	750	855	892	516
75°	264	342	441	518	534	282
85°	61	75	78	67	61	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1965.6	1965.6	1965.6	1965.6	1965.6
2.5°	1955.0	1957.6	1965.6	1971.0	1971.0
5°	1944.3	1949.6	1963.0	1971.0	1973.7
7.5°	1928.3	1936.3	1955.0	1965.6	1968.3
10°	1904.2	1914.9	1938.9	1955.0	1960.3
12.5°	1874.8	1890.9	1920.2	1941.6	1947.0
15°	1837.5	1858.8	1893.5	1920.2	1928.3
17.5°	1794.7	1821.4	1864.2	1896.2	1906.9
20°	1749.3	1776.0	1829.4	1866.8	1880.2
22.5°	1695.9	1730.6	1792.1	1834.8	1845.5
25°	1639.8	1679.9	1746.6	1794.7	1810.7
27.5°	1578.4	1626.5	1698.6	1757.3	1770.7
30°	1514.3	1565.0	1647.8	1711.9	1728.0
32.5°	1447.5	1506.3	1594.4	1666.5	1687.9
35°	1380.8	1439.5	1535.7	1615.8	1639.8
37.5°	1303.3	1372.7	1479.6	1562.4	1591.7
40°	1236.5	1303.3	1418.1	1509.0	1538.3
42.5°	1161.8	1233.9	1354.1	1452.9	1487.6
45°	1087.0	1164.4	1292.6	1396.8	1431.5
47.5°	1017.5	1095.0	1228.5	1338.0	1372.7
50°	945.4	1025.6	1164.4	1276.6	1311.3
52.5°	868.0	956.1	1100.3	1212.5	1252.6
55°	798.5	886.7	1030.9	1148.4	1188.5
57.5°	726.4	817.2	966.8	1079.0	1116.4
60°	659.7	747.8	894.7	1004.2	1046.9
62.5°	587.6	678.4	822.6	929.4	969.5
65°	520.8	608.9	750.5	854.6	892.0
67.5°	454.0	542.2	675.7	774.5	817.2
70°	387.3	475.4	598.2	694.4	731.8
72.5°	328.5	405.9	523.5	611.6	646.3
75°	264.4	341.9	440.7	518.1	534.1
77.5°	205.6	275.1	357.9	392.6	397.9
80°	152.2	205.6	261.7	269.7	269.7
82.5°	101.5	141.5	162.9	165.6	162.9
85°	61.4	74.8	77.5	66.8	61.4
87.5°	21.4	21.4	13.4	8.0	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)