

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: P388776

Luminaire Tested: **24CZ2-50HE-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: P388776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50HE-SQR-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 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: 3881.8 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

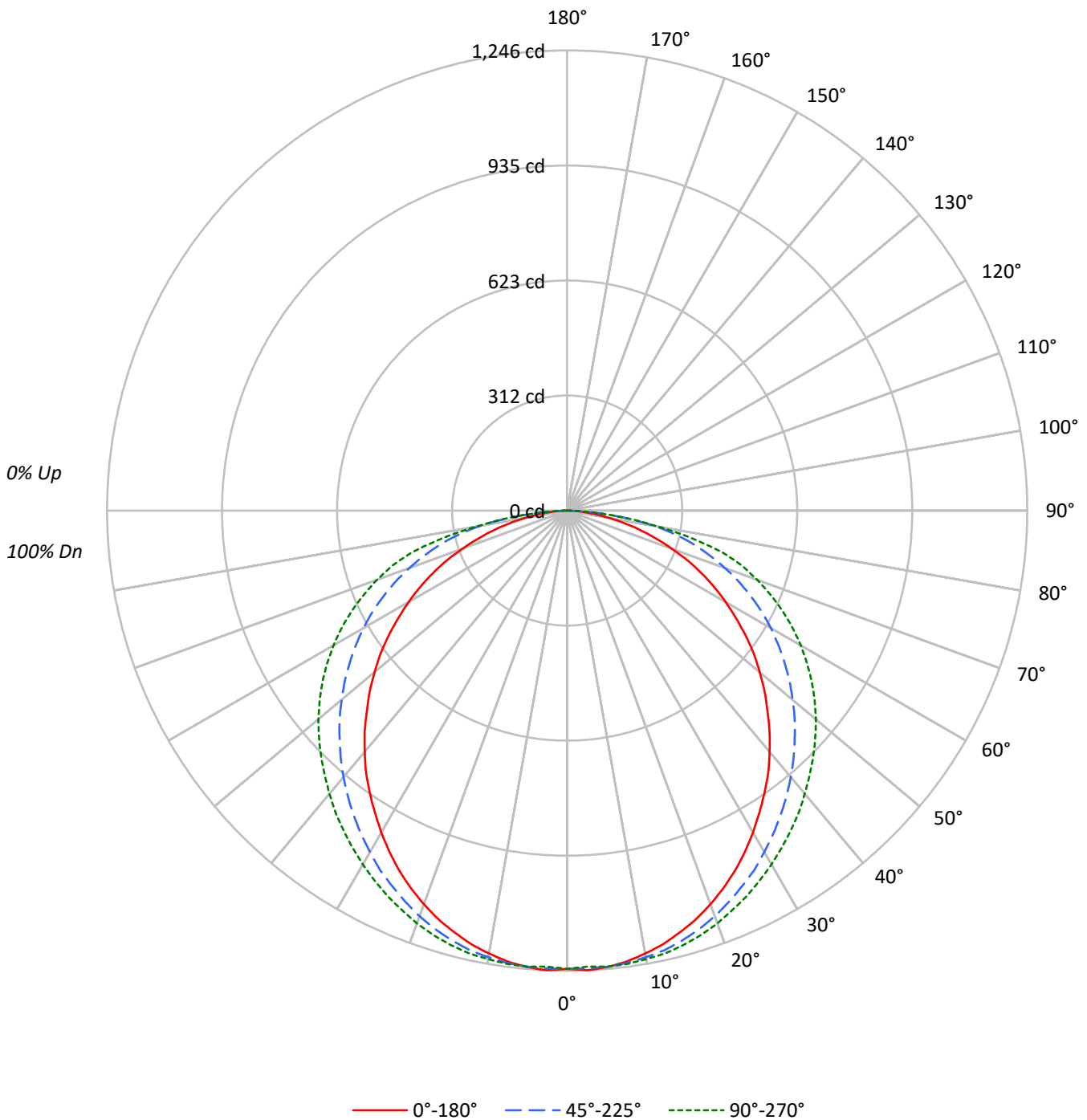
Input Watts (W): 38.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	1669	1669	1669
5°	1676	1674	1674
10°	1664	1678	1685
15°	1646	1678	1696
20°	1624	1674	1703
25°	1597	1665	1709
30°	1563	1659	1719
35°	1531	1655	1735
40°	1497	1655	1758
45°	1459	1658	1793
50°	1425	1669	1841
55°	1383	1687	1897
60°	1335	1714	1966
65°	1277	1747	2049
70°	1185	1790	2153
75°	1073	1852	2253
80°	903	1857	1937
85°	693	1405	1405



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	3.0
10°-20°	338.9	8.7
20°-30°	514.7	13.3
30°-40°	626.1	16.1
40°-50°	666.6	17.2
50°-60°	634.9	16.4
60°-70°	530.9	13.7
70°-80°	354.0	9.1
80°-90°	97.9	2.5
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°	971.4	25.0
0°-40°	1597.5	41.2
0°-60°	2898.9	74.7
0°-90°	3881.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3881.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1241	1233	1240	1240	1240	118
15°	1182	1184	1205	1214	1218	333
25°	1076	1090	1122	1141	1151	495
35°	932	959	1008	1041	1056	583
45°	766	808	872	920	942	593
55°	590	641	719	782	809	527
65°	401	460	549	617	644	396
75°	206	272	356	417	433	219
85°	45	83	91	90	91	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1240.8	1240.8	1240.8	1240.8	1240.8
2.5°	1245.9	1237.0	1240.8	1240.8	1235.7
5°	1240.8	1233.1	1239.5	1239.5	1239.5
7.5°	1231.8	1225.4	1235.7	1238.2	1238.2
10°	1217.7	1215.2	1228.0	1231.8	1233.1
12.5°	1202.4	1201.1	1219.0	1224.1	1228.0
15°	1181.8	1184.4	1204.9	1213.9	1217.7
17.5°	1160.1	1165.2	1188.3	1201.1	1204.9
20°	1134.4	1142.1	1169.0	1181.8	1189.5
22.5°	1106.2	1117.8	1146.0	1161.3	1170.3
25°	1075.5	1089.6	1121.6	1140.8	1151.1
27.5°	1042.1	1060.1	1097.2	1119.0	1129.3
30°	1006.2	1026.7	1067.8	1093.4	1106.2
32.5°	969.1	993.4	1038.3	1066.5	1081.9
35°	931.9	958.8	1007.5	1040.8	1056.2
37.5°	894.7	921.6	975.5	1011.4	1030.6
40°	852.4	884.5	942.1	981.9	1001.1
42.5°	811.4	846.0	907.5	951.1	971.6
45°	766.5	807.6	871.6	920.4	942.1
47.5°	725.5	766.5	835.8	887.0	911.4
50°	680.7	724.2	797.3	853.7	879.3
52.5°	637.1	681.9	758.8	819.1	844.7
55°	589.6	640.9	719.1	781.9	808.8
57.5°	542.2	597.3	678.1	743.5	770.4
60°	496.1	552.5	637.1	702.4	730.6
62.5°	449.9	506.3	594.8	661.4	688.3
65°	401.2	460.2	548.6	616.6	643.5
67.5°	352.5	414.0	502.5	570.4	596.1
70°	301.2	366.6	455.0	521.7	547.3
72.5°	253.8	319.2	406.3	471.7	496.1
75°	206.4	271.7	356.3	416.6	433.3
77.5°	160.2	225.6	301.2	341.0	344.8
80°	116.6	178.2	239.7	251.2	250.0
82.5°	78.2	133.3	165.4	166.6	170.5
85°	44.9	83.3	91.0	89.7	91.0
87.5°	17.9	29.5	25.6	19.2	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)