

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: P388845

Luminaire Tested: **24CZ2-50VHE-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: P388845  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50VHE-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4076.6 lumens  
Efficiency: N/A  
Efficacy: 124.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

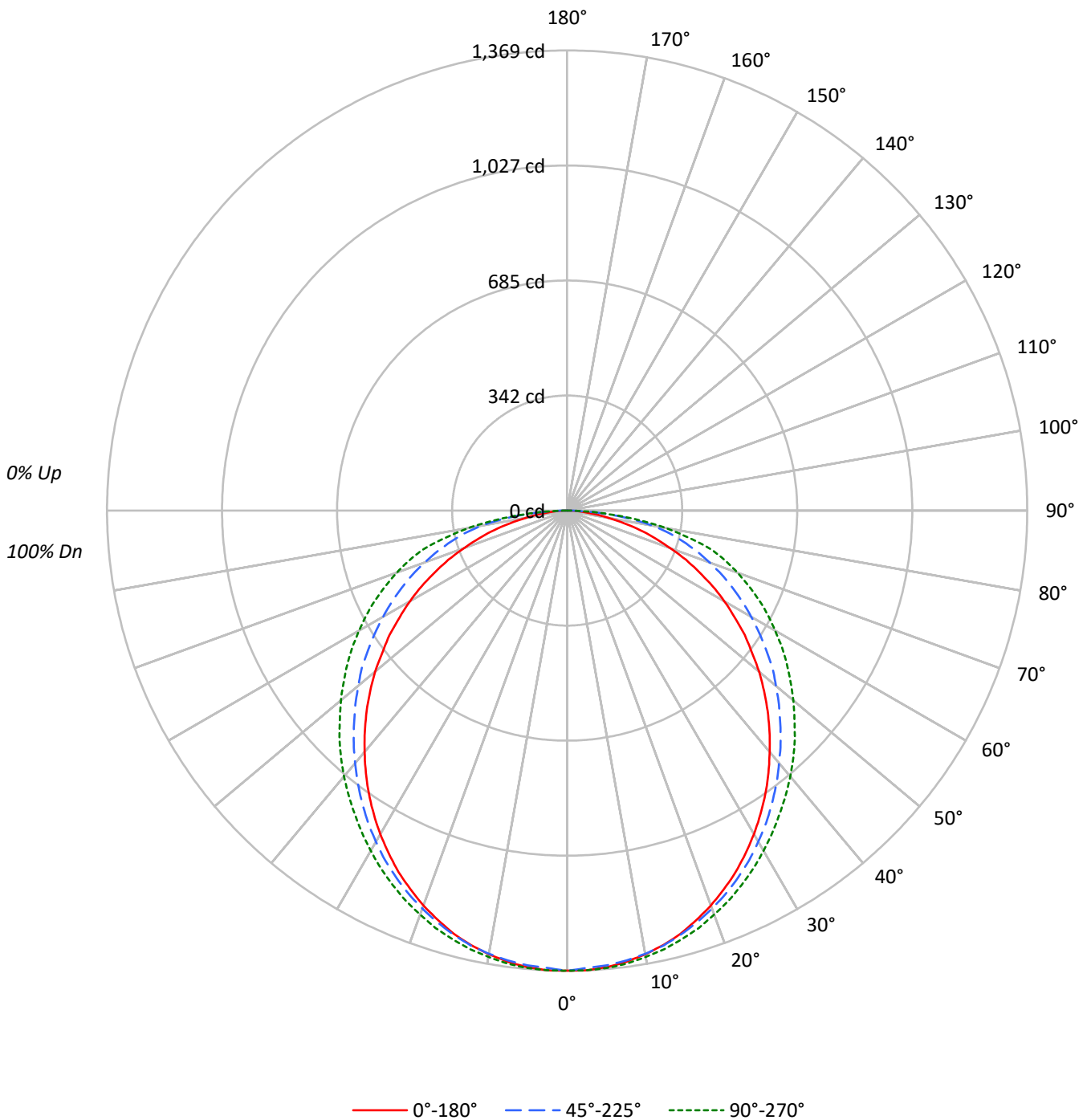
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388845

CATALOG NUMBER: 24CZ2-50VHE-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388845

CATALOG NUMBER: 24CZ2-50VHE-UNV-L930-CD1-SDWPD1-U

**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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1842	1842	1842
5°	1841	1834	1845
10°	1831	1829	1842
15°	1816	1819	1838
20°	1790	1804	1831
25°	1761	1788	1824
30°	1727	1767	1816
35°	1690	1745	1810
40°	1646	1723	1814
45°	1605	1706	1823
50°	1561	1697	1840
55°	1513	1695	1873
60°	1453	1703	1922
65°	1378	1728	2005
70°	1279	1771	2120
75°	1167	1860	2299
80°	959	2003	2298
85°	735	1848	1974



TEST NUMBER: P388845

CATALOG NUMBER: 24CZ2-50VHE-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.4	3.2
10°-20°	369.6	9.1
20°-30°	556.1	13.6
30°-40°	666.5	16.3
40°-50°	694.5	17.0
50°-60°	646.2	15.9
60°-70°	532.2	13.1
70°-80°	362.4	8.9
80°-90°	119.7	2.9
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°	1055.1	25.9
0°-40°	1721.6	42.2
0°-60°	3062.3	75.1
0°-90°	4076.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4076.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1369	1369	1369	1369	1369	
5°	1363	1363	1358	1365	1366	129
15°	1303	1305	1306	1318	1320	367
25°	1186	1192	1204	1224	1229	546
35°	1029	1041	1063	1091	1102	643
45°	844	861	897	942	958	651
55°	645	667	722	780	799	575
65°	433	469	543	607	630	429
75°	224	275	358	422	442	237
85°	48	92	120	128	128	59
90°	0	0	0	0	0	



TEST NUMBER: P388845

CATALOG NUMBER: 24CZ2-50VHE-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1368.7	1368.7	1368.7	1368.7	1368.7
2.5°	1368.7	1368.7	1361.9	1368.7	1368.7
5°	1363.3	1363.3	1357.8	1364.6	1366.0
7.5°	1353.7	1355.1	1349.7	1357.8	1359.2
10°	1340.1	1341.5	1338.8	1346.9	1348.3
12.5°	1323.8	1325.2	1325.2	1334.7	1336.1
15°	1303.4	1304.8	1306.1	1318.4	1319.7
17.5°	1277.5	1281.6	1284.4	1299.3	1302.0
20°	1250.3	1254.4	1259.9	1276.2	1278.9
22.5°	1219.0	1224.5	1234.0	1251.7	1255.8
25°	1186.4	1191.8	1204.1	1224.5	1228.6
27.5°	1149.7	1157.8	1172.8	1194.6	1200.0
30°	1111.6	1119.7	1137.4	1160.5	1168.7
32.5°	1070.7	1081.6	1102.0	1127.9	1136.1
35°	1028.6	1040.8	1062.6	1091.2	1102.0
37.5°	983.7	997.3	1023.1	1054.4	1068.0
40°	937.4	953.7	981.0	1017.7	1032.7
42.5°	891.2	906.1	940.1	979.6	995.9
45°	843.5	861.2	896.6	941.5	957.8
47.5°	794.6	812.2	854.4	902.0	917.0
50°	745.6	763.3	810.9	861.2	878.9
52.5°	692.5	715.6	770.1	820.4	838.1
55°	644.9	666.7	722.4	779.6	798.6
57.5°	590.5	616.3	677.5	737.4	757.8
60°	540.1	567.3	632.7	693.9	714.3
62.5°	488.4	518.4	587.8	650.3	673.5
65°	432.7	469.4	542.9	606.8	629.9
67.5°	382.3	420.4	498.0	563.3	583.7
70°	325.2	371.4	450.3	515.6	538.8
72.5°	276.2	322.4	405.4	469.4	492.5
75°	224.5	274.8	357.8	421.8	442.2
77.5°	172.8	228.6	311.6	360.5	367.3
80°	123.8	182.3	258.5	287.1	296.6
82.5°	87.1	140.1	190.5	209.5	215.0
85°	47.6	92.5	119.7	127.9	127.9
87.5°	20.4	39.5	47.6	49.0	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)