

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: P389783

Luminaire Tested: **24CZ2-50VHE-S-UNV-L930-CD1-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: P389783  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50VHE-S-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4390.1 lumens  
Efficiency: N/A  
Efficacy: 134.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

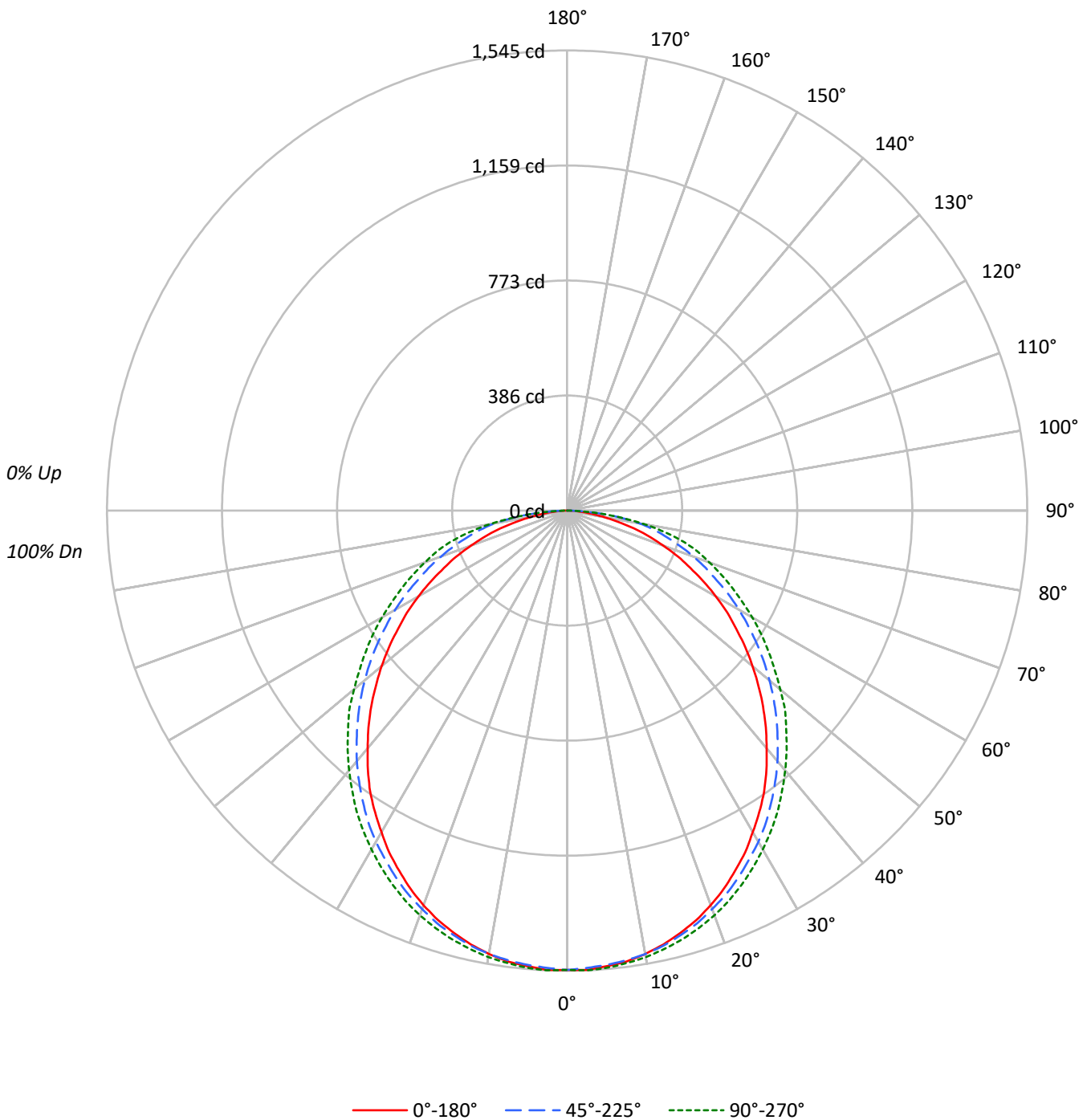
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	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°	2075	2075	2075
5°	2074	2068	2081
10°	2065	2065	2080
15°	2045	2055	2076
20°	2019	2039	2071
25°	1981	2018	2058
30°	1937	1995	2041
35°	1894	1963	2025
40°	1830	1930	2001
45°	1770	1892	1979
50°	1702	1856	1956
55°	1626	1822	1936
60°	1550	1794	1932
65°	1452	1762	1945
70°	1344	1772	1997
75°	1203	1805	2110
80°	972	1912	2063
85°	732	1680	1636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.0	3.3
10°-20°	417.2	9.5
20°-30°	627.1	14.3
30°-40°	747.0	17.0
40°-50°	764.5	17.4
50°-60°	688.3	15.7
60°-70°	540.5	12.3
70°-80°	350.8	8.0
80°-90°	108.5	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°	1190.3	27.1
0°-40°	1937.4	44.1
0°-60°	3390.2	77.2
0°-90°	4390.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4390.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1542	1542	1542	1542	1542	
5°	1535	1538	1531	1540	1541	146
15°	1468	1472	1475	1488	1491	414
25°	1334	1346	1360	1382	1386	615
35°	1153	1167	1195	1224	1233	719
45°	930	952	994	1032	1040	717
55°	693	724	777	817	826	621
65°	456	491	554	600	611	454
75°	232	276	347	395	406	245
85°	47	88	109	106	106	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1542.3	1542.3	1542.3	1542.3	1542.3
2.5°	1543.7	1543.7	1536.7	1543.7	1545.1
5°	1535.3	1538.1	1531.1	1539.5	1540.9
7.5°	1526.9	1526.9	1522.7	1531.1	1532.5
10°	1511.6	1513.0	1511.6	1521.4	1522.7
12.5°	1492.1	1494.9	1496.3	1506.0	1507.4
15°	1468.4	1472.5	1475.3	1487.9	1490.7
17.5°	1441.9	1446.1	1453.0	1467.0	1469.8
20°	1409.8	1415.4	1423.7	1441.9	1446.1
22.5°	1374.9	1380.5	1394.5	1411.2	1418.2
25°	1334.5	1345.7	1359.6	1381.9	1386.1
27.5°	1294.1	1303.8	1321.9	1345.7	1351.2
30°	1246.6	1262.0	1284.3	1308.0	1313.6
32.5°	1200.6	1216.0	1242.5	1267.6	1274.5
35°	1153.2	1167.2	1195.1	1224.3	1232.7
37.5°	1098.8	1117.0	1147.6	1176.9	1185.3
40°	1041.7	1064.0	1098.8	1129.5	1139.3
42.5°	987.3	1011.0	1045.8	1079.3	1090.5
45°	930.1	952.4	994.2	1031.9	1040.3
47.5°	871.5	896.6	941.3	978.9	992.9
50°	813.0	839.5	886.9	925.9	934.3
52.5°	754.4	782.3	832.5	874.3	878.5
55°	693.0	723.7	776.7	817.2	825.5
57.5°	637.3	663.8	720.9	762.8	772.5
60°	575.9	605.2	666.6	705.6	718.1
62.5°	517.3	548.0	612.2	651.2	662.4
65°	456.0	490.8	553.6	599.6	610.8
67.5°	403.0	436.5	503.4	548.0	559.2
70°	341.6	379.3	450.4	496.4	507.6
72.5°	288.7	327.7	398.8	443.4	460.2
75°	231.5	276.1	347.2	394.6	405.8
77.5°	175.7	227.3	299.8	336.1	336.1
80°	125.5	179.9	246.8	263.6	266.3
82.5°	82.3	135.3	182.7	181.3	181.3
85°	47.4	87.9	108.8	106.0	106.0
87.5°	18.1	36.3	39.0	39.0	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)