

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: P390958

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L930-CD2-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: P390958  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-110VHE-RDP-UNV-L930-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6082.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

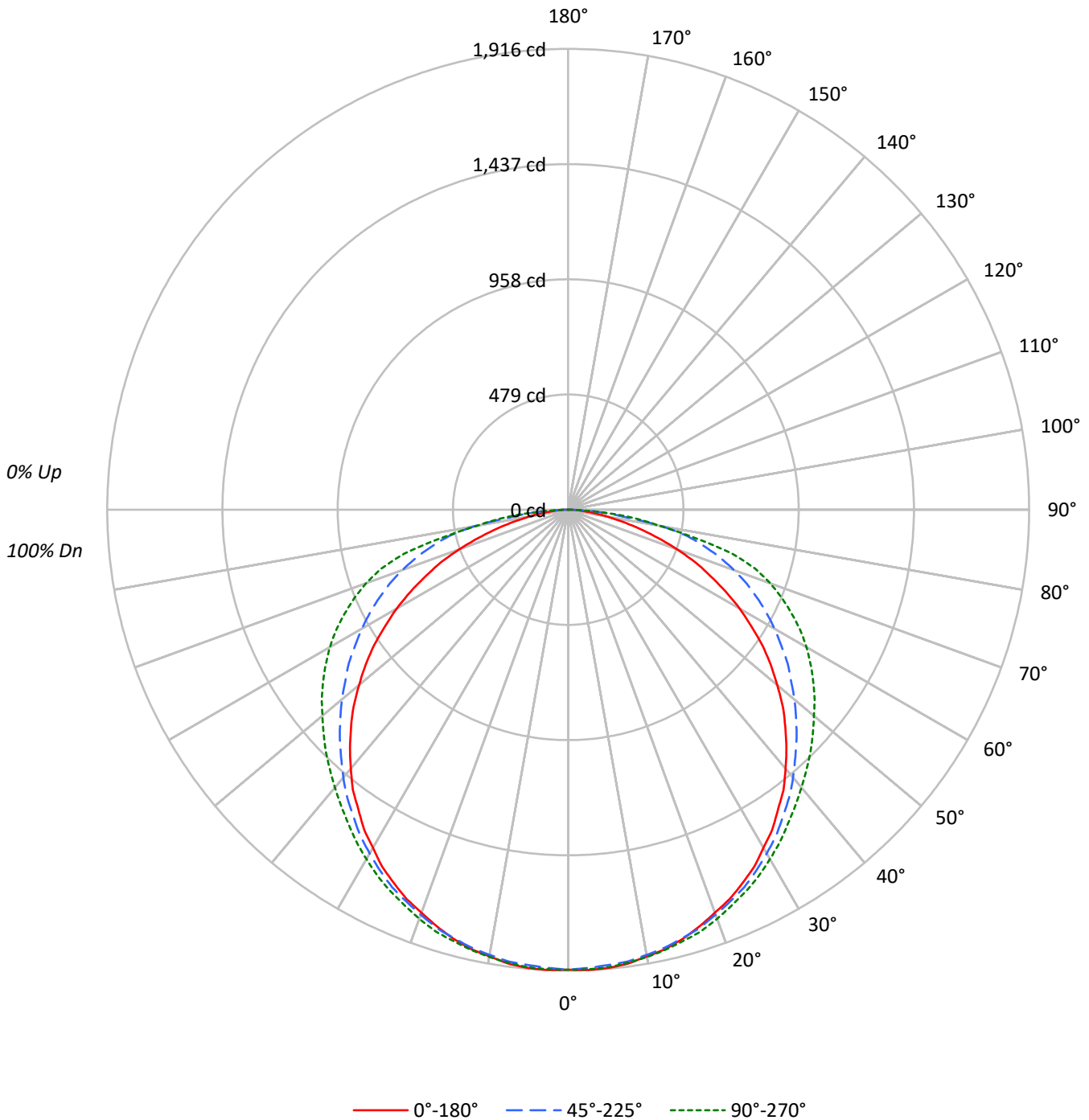
Input Watts (W): 77.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	2573	2573	2573
5°	2583	2567	2579
10°	2576	2568	2580
15°	2572	2567	2584
20°	2553	2566	2592
25°	2544	2571	2598
30°	2522	2564	2606
35°	2497	2557	2616
40°	2469	2554	2649
45°	2428	2555	2709
50°	2374	2570	2791
55°	2314	2611	2916
60°	2216	2663	3077
65°	2074	2756	3266
70°	1887	2884	3513
75°	1600	3042	3670
80°	1262	3062	2968
85°	931	2328	2607



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.4	3.0
10°-20°	522.1	8.6
20°-30°	798.5	13.1
30°-40°	976.1	16.0
40°-50°	1040.4	17.1
50°-60°	994.7	16.4
60°-70°	842.7	13.9
70°-80°	566.3	9.3
80°-90°	159.7	2.6
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°	1502.1	24.7
0°-40°	2478.2	40.7
0°-60°	4513.3	74.2
0°-90°	6082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6082.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1913	1913	1913	1913	1913	
5°	1913	1910	1900	1910	1910	182
15°	1846	1846	1843	1858	1855	521
25°	1714	1720	1732	1747	1750	790
35°	1520	1532	1557	1587	1593	952
45°	1276	1297	1342	1400	1424	984
55°	986	1023	1113	1201	1243	879
65°	652	718	866	980	1026	647
75°	308	419	585	685	706	329
85°	60	124	151	163	169	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1912.6	1912.6	1912.6	1912.6	1912.6
2.5°	1915.6	1915.6	1906.6	1912.6	1912.6
5°	1912.6	1909.6	1900.5	1909.6	1909.6
7.5°	1903.6	1900.5	1894.5	1903.6	1900.5
10°	1885.5	1885.5	1879.4	1888.5	1888.5
12.5°	1870.4	1867.4	1864.3	1876.4	1873.4
15°	1846.2	1846.2	1843.2	1858.3	1855.3
17.5°	1816.1	1819.1	1822.1	1834.2	1837.2
20°	1782.9	1788.9	1791.9	1810.0	1810.0
22.5°	1752.7	1755.7	1761.8	1779.9	1779.9
25°	1713.5	1719.5	1731.6	1746.7	1749.7
27.5°	1674.3	1677.3	1692.4	1713.5	1716.5
30°	1623.0	1632.1	1650.2	1674.3	1677.3
32.5°	1577.8	1586.8	1607.9	1632.1	1638.1
35°	1520.4	1532.5	1556.6	1586.8	1592.8
37.5°	1469.2	1478.2	1508.4	1541.6	1550.6
40°	1405.8	1423.9	1454.1	1493.3	1508.4
42.5°	1342.5	1360.6	1396.8	1448.0	1466.1
45°	1276.1	1297.2	1342.5	1399.8	1423.9
47.5°	1209.7	1233.8	1285.1	1351.5	1378.7
50°	1134.3	1164.5	1227.8	1303.2	1333.4
52.5°	1061.9	1098.1	1167.5	1251.9	1291.2
55°	986.5	1022.7	1113.2	1200.7	1242.9
57.5°	902.0	950.3	1049.8	1149.4	1194.6
60°	823.6	868.8	989.5	1098.1	1143.3
62.5°	739.1	799.4	929.2	1043.8	1089.0
65°	651.6	718.0	865.8	980.4	1025.7
67.5°	573.2	645.6	802.5	917.1	962.3
70°	479.7	570.2	733.1	847.7	893.0
72.5°	392.2	491.7	660.7	772.3	814.5
75°	307.7	419.3	585.2	684.8	705.9
77.5°	229.3	346.9	506.8	549.0	534.0
80°	162.9	277.5	395.2	374.1	383.1
82.5°	105.6	211.2	244.4	277.5	286.6
85°	60.3	123.7	150.8	162.9	168.9
87.5°	27.2	45.3	60.3	60.3	57.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)