

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: P390963

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L940-CD2-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: P390963
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-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6221.0 lumens
Efficiency: N/A
Efficacy: 80.4 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

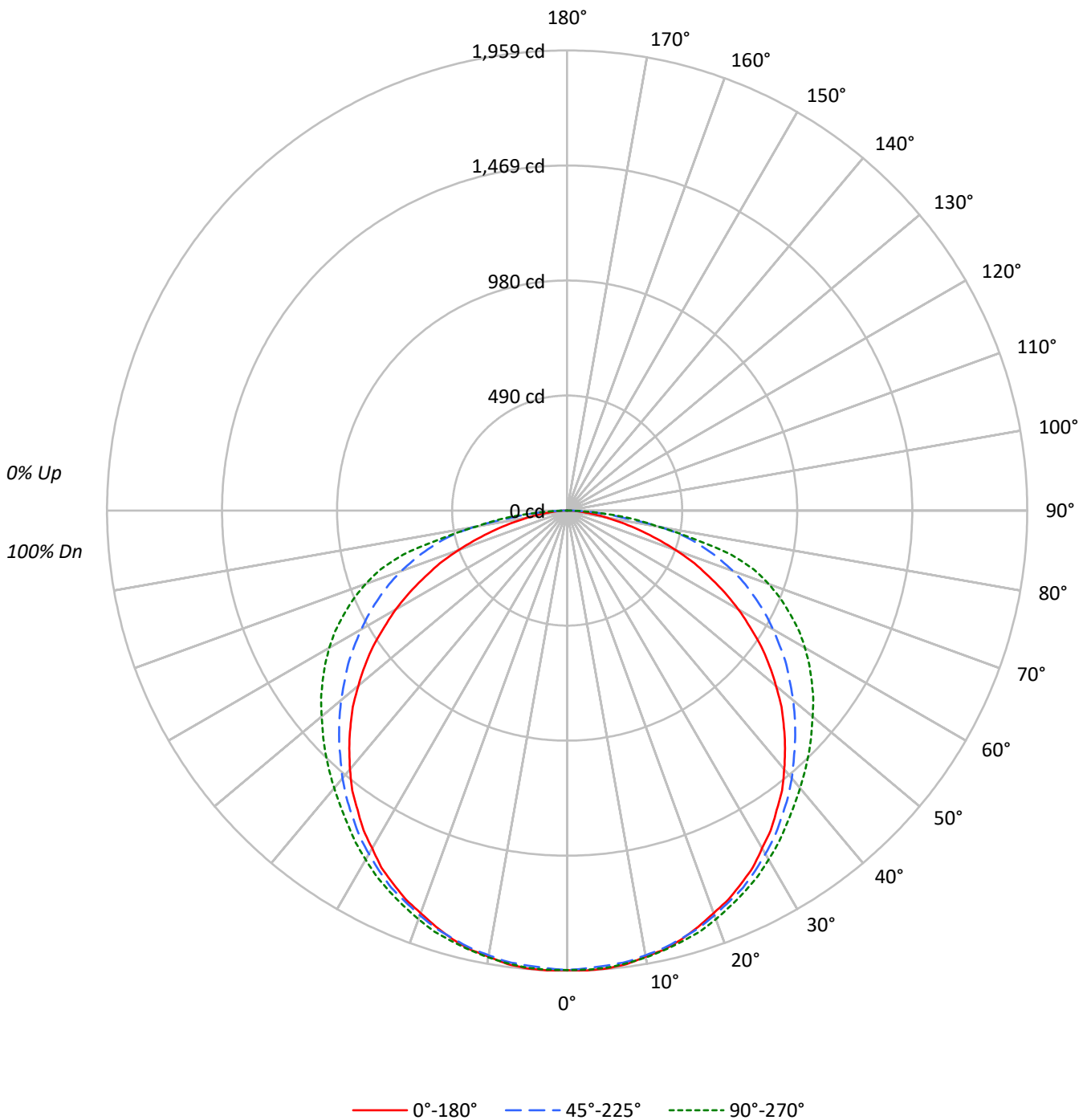
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2632	2632	2632
5°	2642	2626	2638
10°	2635	2626	2639
15°	2630	2626	2643
20°	2611	2624	2651
25°	2602	2629	2657
30°	2579	2622	2665
35°	2554	2615	2676
40°	2526	2612	2710
45°	2484	2613	2771
50°	2429	2629	2855
55°	2367	2671	2982
60°	2267	2724	3147
65°	2122	2819	3340
70°	1930	2950	3593
75°	1636	3112	3754
80°	1291	3132	3037
85°	953	2382	2668



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.6	3.0
10°-20°	534.1	8.6
20°-30°	816.7	13.1
30°-40°	998.4	16.0
40°-50°	1064.1	17.1
50°-60°	1017.5	16.4
60°-70°	861.9	13.9
70°-80°	579.3	9.3
80°-90°	163.4	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°	1536.4	24.7
0°-40°	2534.8	40.7
0°-60°	4616.4	74.2
0°-90°	6221.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6221.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1956	1956	1956	1956	1956	
5°	1956	1953	1944	1953	1953	186
15°	1888	1888	1885	1901	1898	532
25°	1753	1759	1771	1787	1790	808
35°	1555	1568	1592	1623	1629	974
45°	1305	1327	1373	1432	1456	1007
55°	1009	1046	1139	1228	1271	899
65°	666	734	886	1003	1049	662
75°	315	429	599	700	722	337
85°	62	126	154	167	173	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1956.3	1956.3	1956.3	1956.3	1956.3
2.5°	1959.4	1959.4	1950.2	1956.3	1956.3
5°	1956.3	1953.2	1944.0	1953.2	1953.2
7.5°	1947.1	1944.0	1937.8	1947.1	1944.0
10°	1928.6	1928.6	1922.4	1931.6	1931.6
12.5°	1913.1	1910.0	1907.0	1919.3	1916.2
15°	1888.4	1888.4	1885.4	1900.8	1897.7
17.5°	1857.6	1860.7	1863.8	1876.1	1879.2
20°	1823.6	1829.8	1832.9	1851.4	1851.4
22.5°	1792.8	1795.9	1802.0	1820.6	1820.6
25°	1752.7	1758.8	1771.2	1786.6	1789.7
27.5°	1712.6	1715.6	1731.1	1752.7	1755.8
30°	1660.1	1669.4	1687.9	1712.6	1715.6
32.5°	1613.8	1623.1	1644.7	1669.4	1675.5
35°	1555.2	1567.5	1592.2	1623.1	1629.2
37.5°	1502.7	1512.0	1542.8	1576.8	1586.0
40°	1437.9	1456.4	1487.3	1527.4	1542.8
42.5°	1373.1	1391.6	1428.7	1481.1	1499.6
45°	1305.2	1326.8	1373.1	1431.8	1456.4
47.5°	1237.4	1262.0	1314.5	1382.4	1410.2
50°	1160.2	1191.1	1255.9	1333.0	1363.9
52.5°	1086.2	1123.2	1194.2	1280.6	1320.7
55°	1009.0	1046.0	1138.6	1228.1	1271.3
57.5°	922.6	972.0	1073.8	1175.6	1221.9
60°	842.4	888.7	1012.1	1123.2	1169.5
62.5°	756.0	817.7	950.4	1067.6	1113.9
65°	666.5	734.4	885.6	1002.8	1049.1
67.5°	586.3	660.3	820.8	938.0	984.3
70°	490.6	583.2	749.8	867.1	913.4
72.5°	401.1	503.0	675.8	789.9	833.1
75°	314.7	428.9	598.6	700.5	722.1
77.5°	234.5	354.9	518.4	561.6	546.2
80°	166.6	283.9	404.2	382.6	391.9
82.5°	108.0	216.0	249.9	283.9	293.1
85°	61.7	126.5	154.3	166.6	172.8
87.5°	27.8	46.3	61.7	61.7	58.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)