

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: P390957

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L930-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: P390957
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-SDWPD1-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: 6008.7 lumens
Efficiency: N/A
Efficacy: 77.6 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

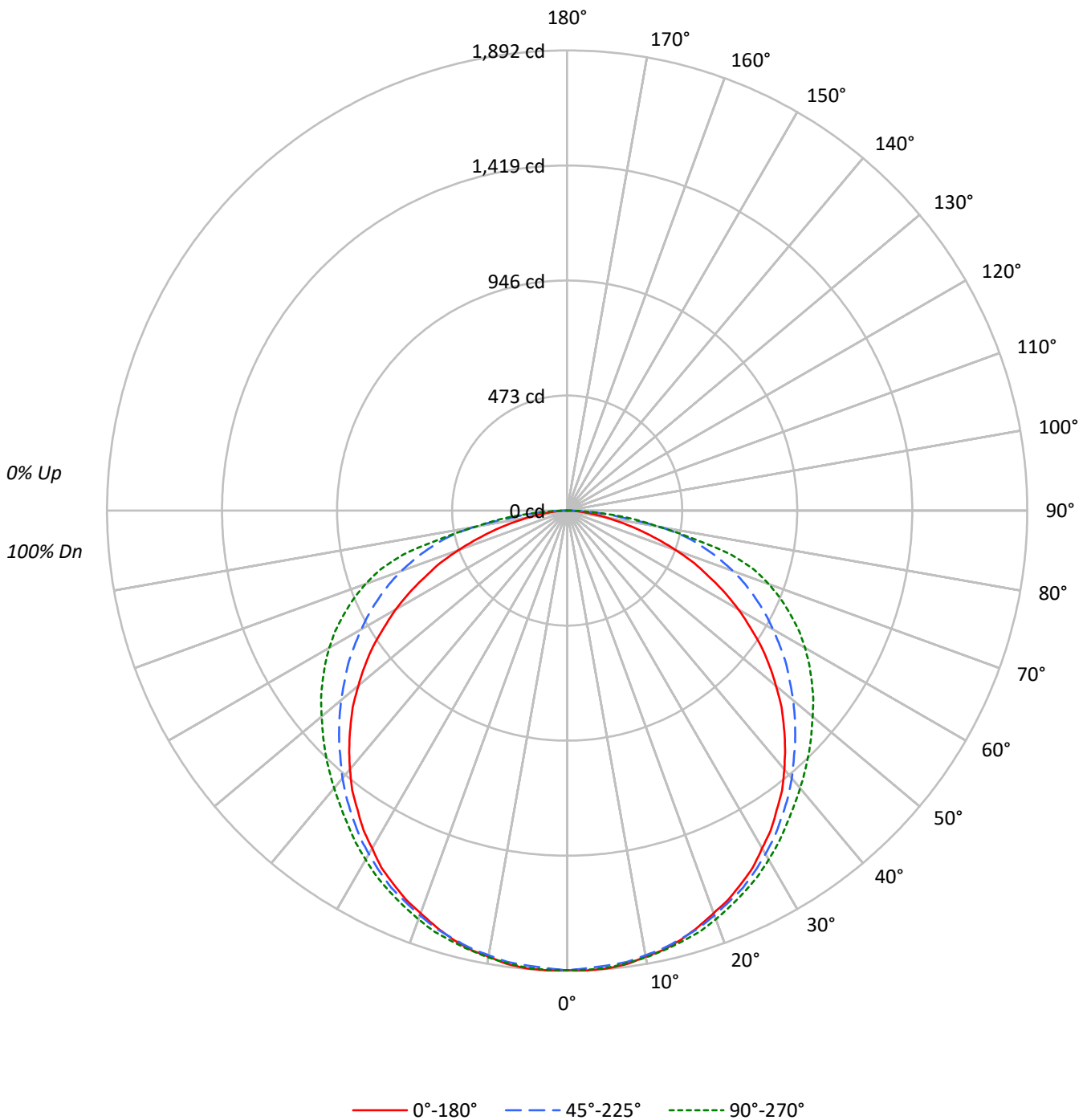
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2542	2542	2542
5°	2552	2536	2548
10°	2545	2537	2549
15°	2541	2537	2553
20°	2522	2535	2560
25°	2513	2540	2566
30°	2491	2533	2575
35°	2467	2526	2585
40°	2439	2523	2617
45°	2399	2524	2677
50°	2346	2539	2757
55°	2286	2580	2880
60°	2189	2631	3040
65°	2050	2723	3226
70°	1864	2849	3471
75°	1580	3006	3625
80°	1247	3025	2933
85°	920	2300	2577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.2	3.0
10°-20°	515.9	8.6
20°-30°	788.9	13.1
30°-40°	964.4	16.0
40°-50°	1027.8	17.1
50°-60°	982.7	16.4
60°-70°	832.5	13.9
70°-80°	559.5	9.3
80°-90°	157.8	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°	1484.0	24.7
0°-40°	2448.3	40.7
0°-60°	4458.9	74.2
0°-90°	6008.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6008.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1890	1890	1890	1890	1890	
5°	1890	1887	1878	1887	1887	180
15°	1824	1824	1821	1836	1833	514
25°	1693	1699	1711	1726	1729	780
35°	1502	1514	1538	1568	1574	941
45°	1261	1282	1326	1383	1407	972
55°	975	1010	1100	1186	1228	868
65°	644	709	855	969	1013	639
75°	304	414	578	676	697	326
85°	60	122	149	161	167	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1889.6	1889.6	1889.6	1889.6	1889.6
2.5°	1892.5	1892.5	1883.6	1889.6	1889.6
5°	1889.6	1886.6	1877.6	1886.6	1886.6
7.5°	1880.6	1877.6	1871.7	1880.6	1877.6
10°	1862.7	1862.7	1856.8	1865.7	1865.7
12.5°	1847.8	1844.9	1841.9	1853.8	1850.8
15°	1824.0	1824.0	1821.0	1835.9	1832.9
17.5°	1794.2	1797.2	1800.2	1812.1	1815.1
20°	1761.4	1767.4	1770.3	1788.2	1788.2
22.5°	1731.6	1734.6	1740.5	1758.4	1758.4
25°	1692.9	1698.8	1710.7	1725.6	1728.6
27.5°	1654.1	1657.1	1672.0	1692.9	1695.8
30°	1603.4	1612.4	1630.3	1654.1	1657.1
32.5°	1558.7	1567.7	1588.5	1612.4	1618.3
35°	1502.1	1514.0	1537.9	1567.7	1573.6
37.5°	1451.4	1460.4	1490.2	1523.0	1531.9
40°	1388.9	1406.7	1436.5	1475.3	1490.2
42.5°	1326.3	1344.2	1379.9	1430.6	1448.5
45°	1260.7	1281.6	1326.3	1382.9	1406.7
47.5°	1195.1	1219.0	1269.6	1335.2	1362.0
50°	1120.6	1150.4	1213.0	1287.5	1317.3
52.5°	1049.1	1084.9	1153.4	1236.9	1275.6
55°	974.6	1010.4	1099.8	1186.2	1227.9
57.5°	891.1	938.8	1037.2	1135.5	1180.2
60°	813.6	858.4	977.6	1084.9	1129.6
62.5°	730.2	789.8	918.0	1031.2	1075.9
65°	643.8	709.3	855.4	968.6	1013.3
67.5°	566.3	637.8	792.8	906.0	950.7
70°	473.9	563.3	724.2	837.5	882.2
72.5°	387.5	485.8	652.7	763.0	804.7
75°	304.0	414.3	578.2	676.5	697.4
77.5°	226.5	342.7	500.7	542.4	527.5
80°	160.9	274.2	390.4	369.6	378.5
82.5°	104.3	208.6	241.4	274.2	283.1
85°	59.6	122.2	149.0	160.9	166.9
87.5°	26.8	44.7	59.6	59.6	56.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)