

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: P391710

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L950-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: P391710
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: 24CZ2-80VHE-HRP-UNV-L950-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6103.5 lumens
Efficiency: N/A
Efficacy: 113.4 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

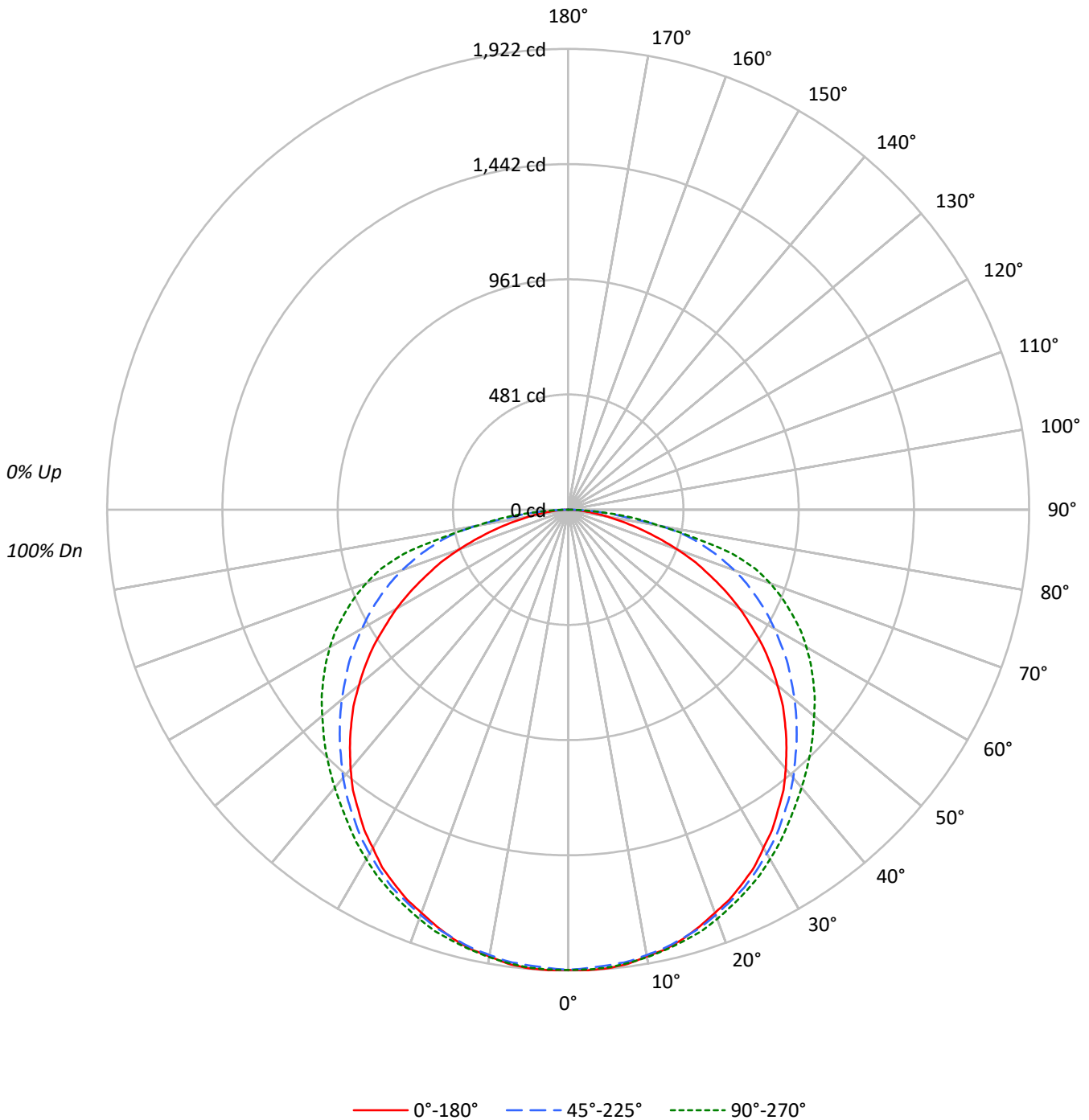
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2583	2583	2583
5°	2592	2576	2588
10°	2585	2577	2589
15°	2581	2577	2594
20°	2562	2575	2601
25°	2553	2580	2607
30°	2530	2573	2615
35°	2506	2566	2626
40°	2478	2563	2659
45°	2437	2563	2719
50°	2383	2579	2801
55°	2322	2620	2926
60°	2224	2672	3088
65°	2082	2766	3277
70°	1894	2894	3525
75°	1605	3053	3683
80°	1267	3073	2979
85°	934	2337	2617



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.1	3.0
10°-20°	524.0	8.6
20°-30°	801.3	13.1
30°-40°	979.6	16.0
40°-50°	1044.0	17.1
50°-60°	998.2	16.4
60°-70°	845.6	13.9
70°-80°	568.3	9.3
80°-90°	160.3	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°	1507.4	24.7
0°-40°	2486.9	40.7
0°-60°	4529.2	74.2
0°-90°	6103.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6103.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1919	1919	1919	1919	1919	
5°	1919	1916	1907	1916	1916	182
15°	1853	1853	1850	1865	1862	522
25°	1720	1726	1738	1753	1756	793
35°	1526	1538	1562	1592	1598	956
45°	1281	1302	1347	1405	1429	988
55°	990	1026	1117	1205	1247	882
65°	654	720	869	984	1029	649
75°	309	421	587	687	708	331
85°	60	124	151	164	170	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1919.4	1919.4	1919.4	1919.4	1919.4
2.5°	1922.4	1922.4	1913.3	1919.4	1919.4
5°	1919.4	1916.3	1907.3	1916.3	1916.3
7.5°	1910.3	1907.3	1901.2	1910.3	1907.3
10°	1892.1	1892.1	1886.1	1895.2	1895.2
12.5°	1877.0	1874.0	1870.9	1883.0	1880.0
15°	1852.8	1852.8	1849.7	1864.9	1861.9
17.5°	1822.5	1825.5	1828.6	1840.7	1843.7
20°	1789.2	1795.3	1798.3	1816.4	1816.4
22.5°	1758.9	1762.0	1768.0	1786.2	1786.2
25°	1719.6	1725.6	1737.7	1752.9	1755.9
27.5°	1680.2	1683.2	1698.4	1719.6	1722.6
30°	1628.7	1637.8	1656.0	1680.2	1683.2
32.5°	1583.3	1592.4	1613.6	1637.8	1643.9
35°	1525.8	1537.9	1562.1	1592.4	1598.5
37.5°	1474.3	1483.4	1513.7	1547.0	1556.1
40°	1410.8	1428.9	1459.2	1498.6	1513.7
42.5°	1347.2	1365.4	1401.7	1453.2	1471.3
45°	1280.6	1301.8	1347.2	1404.7	1428.9
47.5°	1214.0	1238.2	1289.7	1356.3	1383.5
50°	1138.3	1168.6	1232.2	1307.8	1338.1
52.5°	1065.6	1102.0	1171.6	1256.4	1295.7
55°	990.0	1026.3	1117.1	1204.9	1247.3
57.5°	905.2	953.6	1053.5	1153.4	1198.9
60°	826.5	871.9	993.0	1102.0	1147.4
62.5°	741.7	802.3	932.4	1047.5	1092.9
65°	653.9	720.5	868.9	983.9	1029.3
67.5°	575.2	647.9	805.3	920.3	965.7
70°	481.4	572.2	735.7	850.7	896.1
72.5°	393.6	493.5	663.0	775.0	817.4
75°	308.8	420.8	587.3	687.2	708.4
77.5°	230.1	348.2	508.6	551.0	535.9
80°	163.5	278.5	396.6	375.4	384.5
82.5°	106.0	211.9	245.2	278.5	287.6
85°	60.5	124.1	151.4	163.5	169.5
87.5°	27.2	45.4	60.5	60.5	57.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)