

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: P391806

Luminaire Tested: **24CZ2-90VHE-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: P391806
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: 24CZ2-90VHE-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: 6798.1 lumens
Efficiency: N/A
Efficacy: 110.0 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

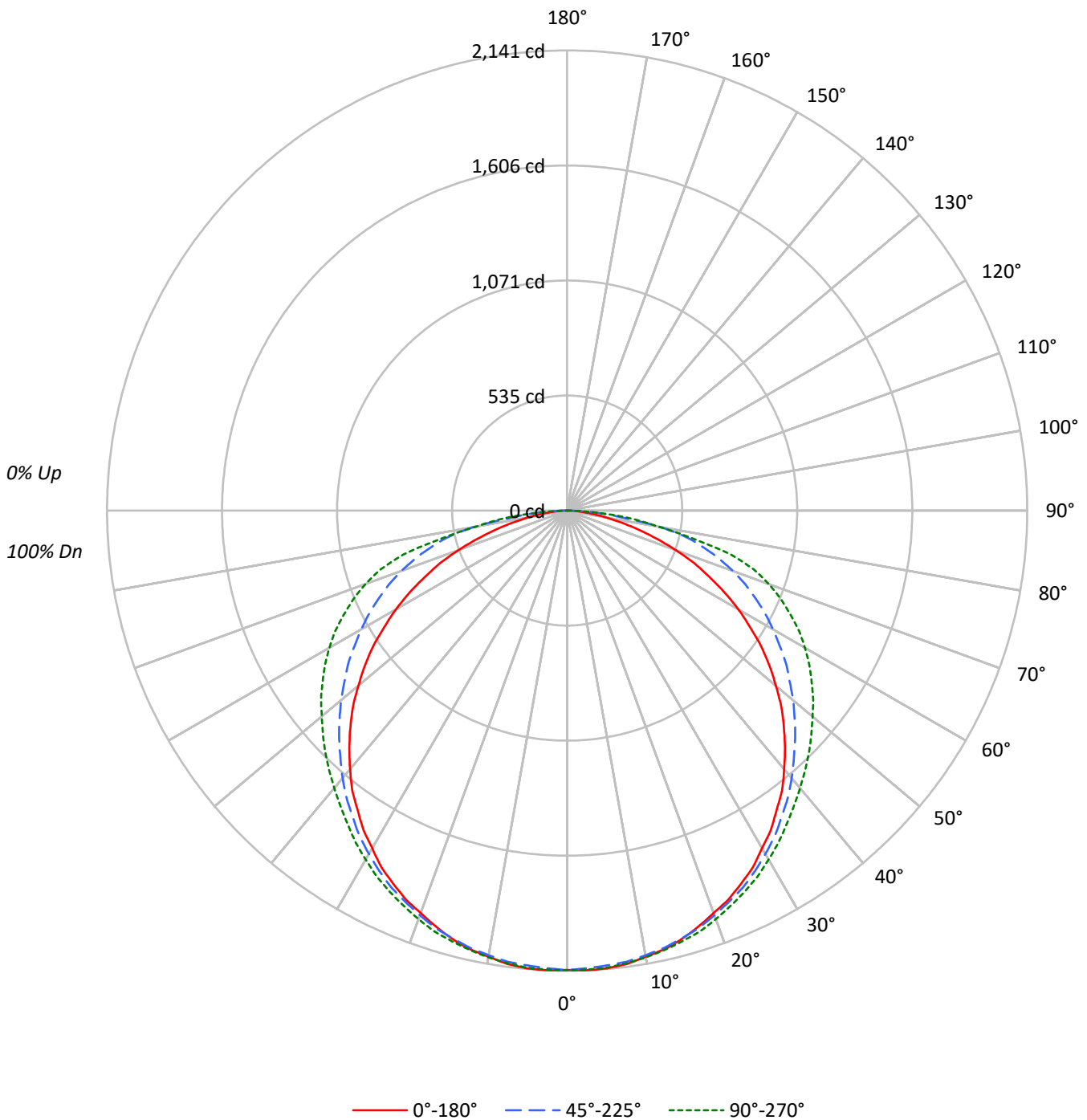
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2876	2876	2876
5°	2887	2869	2883
10°	2879	2870	2884
15°	2874	2870	2889
20°	2853	2868	2897
25°	2843	2873	2903
30°	2818	2866	2913
35°	2791	2858	2924
40°	2760	2855	2961
45°	2714	2855	3029
50°	2654	2873	3120
55°	2586	2919	3259
60°	2477	2976	3439
65°	2319	3081	3650
70°	2109	3223	3926
75°	1788	3401	4102
80°	1411	3422	3318
85°	1041	2603	2915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	3.0
10°-20°	583.6	8.6
20°-30°	892.5	13.1
30°-40°	1091.1	16.0
40°-50°	1162.8	17.1
50°-60°	1111.8	16.4
60°-70°	941.9	13.9
70°-80°	633.0	9.3
80°-90°	178.5	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°	1678.9	24.7
0°-40°	2770.0	40.7
0°-60°	5044.7	74.2
0°-90°	6798.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6798.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2138	2138	2138	2138	2138	
5°	2138	2134	2124	2134	2134	203
15°	2064	2064	2060	2077	2074	582
25°	1915	1922	1936	1952	1956	883
35°	1700	1713	1740	1774	1780	1065
45°	1426	1450	1500	1565	1592	1100
55°	1103	1143	1244	1342	1389	982
65°	728	802	968	1096	1146	723
75°	344	469	654	765	789	368
85°	67	138	169	182	189	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2137.8	2137.8	2137.8	2137.8	2137.8
2.5°	2141.2	2141.2	2131.1	2137.8	2137.8
5°	2137.8	2134.4	2124.3	2134.4	2134.4
7.5°	2127.7	2124.3	2117.6	2127.7	2124.3
10°	2107.5	2107.5	2100.7	2110.8	2110.8
12.5°	2090.6	2087.2	2083.9	2097.3	2094.0
15°	2063.6	2063.6	2060.3	2077.1	2073.7
17.5°	2029.9	2033.3	2036.7	2050.1	2053.5
20°	1992.8	1999.6	2002.9	2023.2	2023.2
22.5°	1959.1	1962.5	1969.2	1989.4	1989.4
25°	1915.3	1922.0	1935.5	1952.4	1955.7
27.5°	1871.4	1874.8	1891.7	1915.3	1918.6
30°	1814.1	1824.2	1844.4	1871.4	1874.8
32.5°	1763.5	1773.6	1797.2	1824.2	1831.0
35°	1699.5	1712.9	1739.9	1773.6	1780.4
37.5°	1642.1	1652.2	1686.0	1723.1	1733.2
40°	1571.3	1591.6	1625.3	1669.1	1686.0
42.5°	1500.5	1520.7	1561.2	1618.5	1638.8
45°	1426.3	1449.9	1500.5	1564.6	1591.6
47.5°	1352.1	1379.1	1436.4	1510.6	1541.0
50°	1267.8	1301.6	1372.4	1456.7	1490.4
52.5°	1186.9	1227.4	1304.9	1399.4	1443.2
55°	1102.6	1143.1	1244.2	1342.0	1389.2
57.5°	1008.2	1062.2	1173.4	1284.7	1335.3
60°	920.5	971.1	1106.0	1227.4	1278.0
62.5°	826.1	893.6	1038.6	1166.7	1217.3
65°	728.3	802.5	967.7	1095.9	1146.5
67.5°	640.7	721.6	896.9	1025.1	1075.6
70°	536.1	637.3	819.4	947.5	998.1
72.5°	438.4	549.6	738.5	863.2	910.4
75°	343.9	468.7	654.2	765.4	789.0
77.5°	256.3	387.8	566.5	613.7	596.8
80°	182.1	310.2	441.7	418.1	428.2
82.5°	118.0	236.0	273.1	310.2	320.3
85°	67.4	138.2	168.6	182.1	188.8
87.5°	30.3	50.6	67.4	67.4	64.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)