

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: P389862

Luminaire Tested: **24CZ2-65VHE-S-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: P389862  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65VHE-S-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6102.4 lumens  
Efficiency: N/A  
Efficacy: 144.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

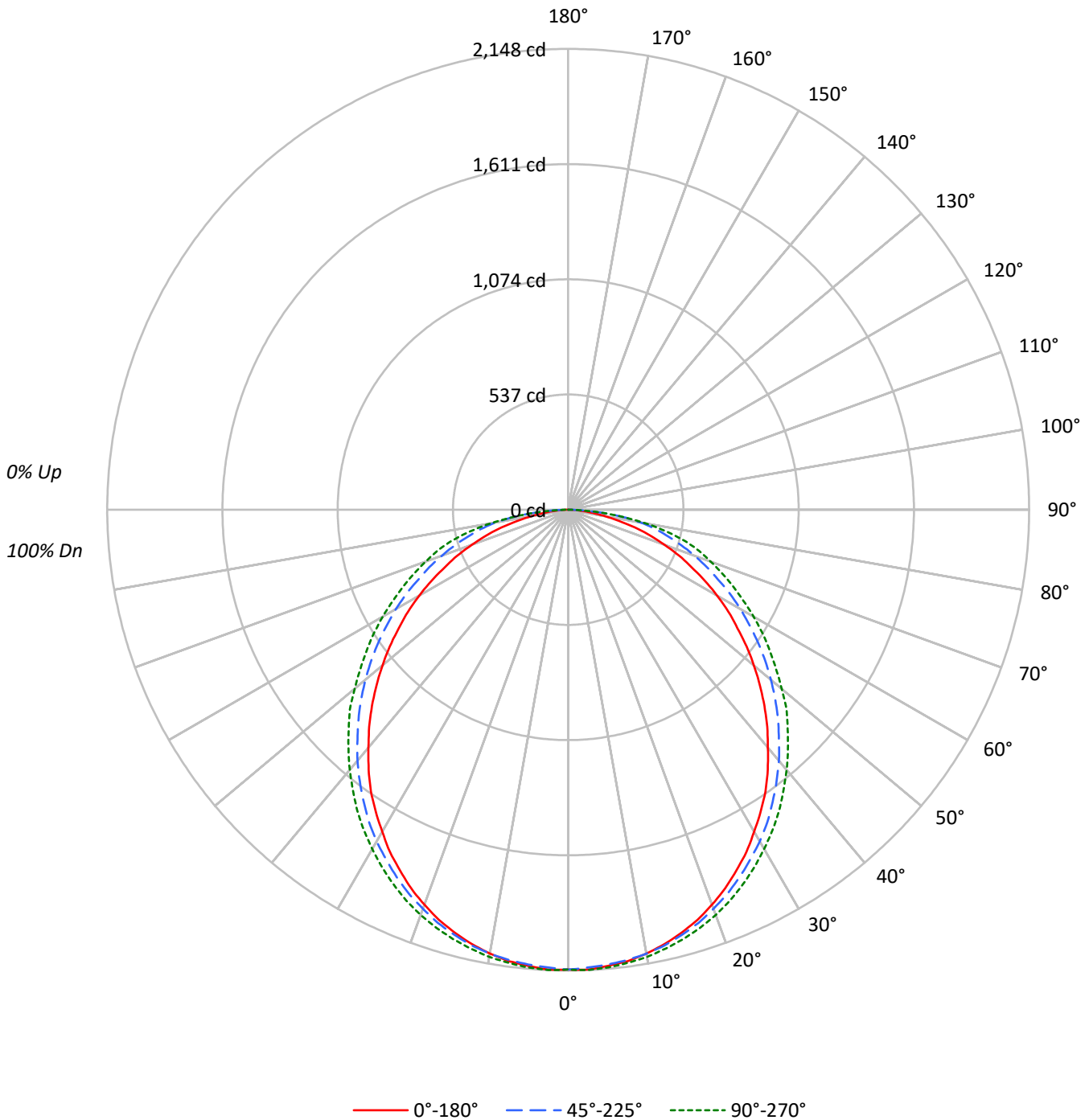
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389862

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L950-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389862

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L950-CD1-SDWPD1-U

**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2884	2884	2884
5°	2882	2875	2893
10°	2871	2871	2892
15°	2843	2857	2886
20°	2806	2834	2878
25°	2754	2806	2860
30°	2692	2774	2837
35°	2633	2729	2814
40°	2543	2683	2781
45°	2460	2630	2751
50°	2366	2581	2718
55°	2260	2533	2692
60°	2154	2493	2686
65°	2018	2450	2703
70°	1868	2463	2776
75°	1673	2509	2933
80°	1352	2658	2868
85°	1017	2334	2274



TEST NUMBER: P389862

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L950-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.0	3.3
10°-20°	579.9	9.5
20°-30°	871.8	14.3
30°-40°	1038.4	17.0
40°-50°	1062.8	17.4
50°-60°	956.8	15.7
60°-70°	751.4	12.3
70°-80°	487.7	8.0
80°-90°	150.8	2.5
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°	1654.6	27.1
0°-40°	2693.0	44.1
0°-60°	4712.6	77.2
0°-90°	6102.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6102.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2144	2144	2144	2144	2144	
5°	2134	2138	2128	2140	2142	203
15°	2041	2047	2051	2068	2072	576
25°	1855	1870	1890	1921	1927	855
35°	1603	1622	1661	1702	1714	1000
45°	1293	1324	1382	1434	1446	997
55°	963	1006	1080	1136	1148	864
65°	634	682	770	834	849	631
75°	322	384	483	549	564	340
85°	66	122	151	147	147	80
90°	0	0	0	0	0	



TEST NUMBER: P389862

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L950-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2143.8	2143.8	2143.8	2143.8	2143.8
2.5°	2145.8	2145.8	2136.1	2145.8	2147.7
5°	2134.1	2138.0	2128.3	2139.9	2141.9
7.5°	2122.5	2122.5	2116.7	2128.3	2130.2
10°	2101.2	2103.1	2101.2	2114.7	2116.7
12.5°	2074.0	2077.9	2079.8	2093.4	2095.4
15°	2041.1	2046.9	2050.8	2068.2	2072.1
17.5°	2004.3	2010.1	2019.8	2039.1	2043.0
20°	1959.7	1967.4	1979.1	2004.3	2010.1
22.5°	1911.2	1919.0	1938.3	1961.6	1971.3
25°	1855.0	1870.5	1889.9	1920.9	1926.7
27.5°	1798.8	1812.4	1837.6	1870.5	1878.3
30°	1732.9	1754.2	1785.2	1818.2	1825.9
32.5°	1668.9	1690.2	1727.1	1762.0	1771.7
35°	1603.0	1622.4	1661.2	1701.9	1713.5
37.5°	1527.4	1552.6	1595.3	1636.0	1647.6
40°	1447.9	1479.0	1527.4	1570.1	1583.6
42.5°	1372.4	1405.3	1453.8	1500.3	1515.8
45°	1292.9	1323.9	1382.0	1434.4	1446.0
47.5°	1211.5	1246.4	1308.4	1360.7	1380.1
50°	1130.1	1166.9	1232.8	1287.1	1298.7
52.5°	1048.6	1087.4	1157.2	1215.3	1221.2
55°	963.4	1006.0	1079.7	1135.9	1147.5
57.5°	885.8	922.7	1002.1	1060.3	1073.8
60°	800.5	841.2	926.5	980.8	998.2
62.5°	719.1	761.8	850.9	905.2	920.7
65°	633.8	682.3	769.5	833.5	849.0
67.5°	560.2	606.7	699.7	761.8	777.3
70°	474.9	527.2	626.1	690.1	705.6
72.5°	401.2	455.5	554.4	616.4	639.7
75°	321.8	383.8	482.6	548.6	564.1
77.5°	244.2	316.0	416.7	467.1	467.1
80°	174.5	250.0	343.1	366.3	370.2
82.5°	114.4	188.0	253.9	252.0	252.0
85°	65.9	122.1	151.2	147.3	147.3
87.5°	25.2	50.4	54.3	54.3	52.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)