

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: P389792

Luminaire Tested: **24CZ2-50VHE-S-UNV-L950-CD1-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: P389792  
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: 24CZ2-50VHE-S-UNV-L950-CD1-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: 4824.5 lumens  
Efficiency: N/A  
Efficacy: 147.5 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

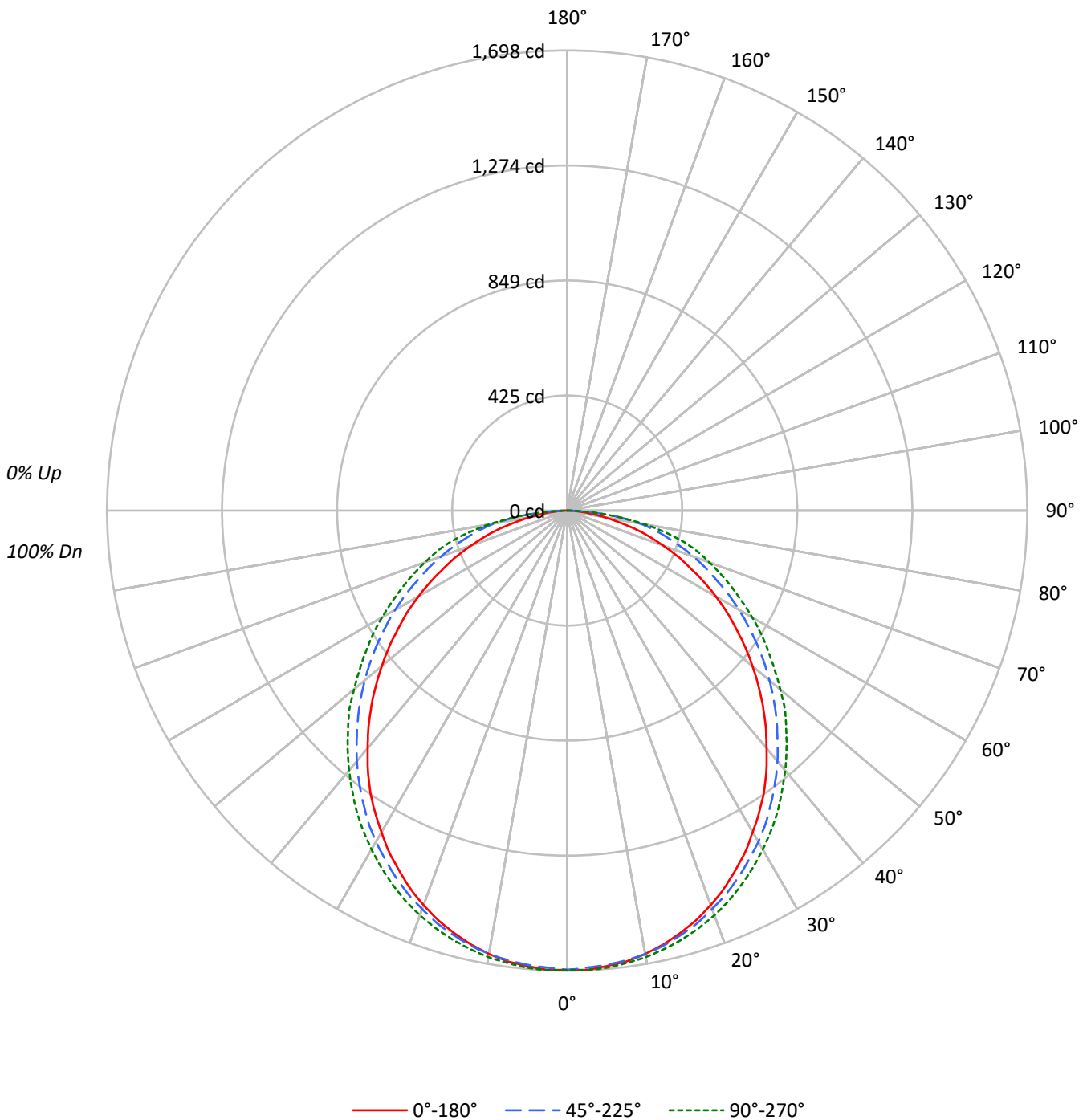
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2280	2280	2280
5°	2279	2273	2287
10°	2270	2270	2286
15°	2248	2258	2282
20°	2218	2240	2275
25°	2177	2218	2261
30°	2128	2193	2243
35°	2082	2157	2225
40°	2011	2121	2199
45°	1945	2079	2175
50°	1870	2040	2149
55°	1787	2002	2128
60°	1703	1971	2124
65°	1595	1937	2137
70°	1477	1947	2194
75°	1323	1984	2318
80°	1068	2101	2268
85°	804	1845	1798



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.5	3.3
10°-20°	458.5	9.5
20°-30°	689.2	14.3
30°-40°	820.9	17.0
40°-50°	840.2	17.4
50°-60°	756.4	15.7
60°-70°	594.0	12.3
70°-80°	385.5	8.0
80°-90°	119.2	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°	1308.1	27.1
0°-40°	2129.1	44.1
0°-60°	3725.7	77.2
0°-90°	4824.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4824.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1695	1695	1695	1695	1695	
5°	1687	1690	1683	1692	1693	160
15°	1614	1618	1621	1635	1638	455
25°	1466	1479	1494	1519	1523	676
35°	1267	1283	1313	1346	1355	791
45°	1022	1047	1093	1134	1143	788
55°	762	795	854	898	907	683
65°	501	539	608	659	671	499
75°	254	303	382	434	446	269
85°	52	96	120	116	116	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1694.9	1694.9	1694.9	1694.9	1694.9
2.5°	1696.4	1696.4	1688.7	1696.4	1697.9
5°	1687.2	1690.3	1682.6	1691.8	1693.3
7.5°	1678.0	1678.0	1673.4	1682.6	1684.2
10°	1661.2	1662.7	1661.2	1671.9	1673.4
12.5°	1639.7	1642.8	1644.3	1655.0	1656.6
15°	1613.7	1618.3	1621.3	1635.1	1638.2
17.5°	1584.5	1589.1	1596.8	1612.1	1615.2
20°	1549.3	1555.4	1564.6	1584.5	1589.1
22.5°	1511.0	1517.1	1532.4	1550.8	1558.5
25°	1466.5	1478.8	1494.1	1518.6	1523.2
27.5°	1422.1	1432.8	1452.8	1478.8	1484.9
30°	1370.0	1386.9	1411.4	1437.4	1443.6
32.5°	1319.4	1336.3	1365.4	1393.0	1400.6
35°	1267.3	1282.7	1313.3	1345.5	1354.7
37.5°	1207.6	1227.5	1261.2	1293.4	1302.6
40°	1144.7	1169.3	1207.6	1241.3	1252.0
42.5°	1085.0	1111.0	1149.3	1186.1	1198.4
45°	1022.1	1046.7	1092.6	1134.0	1143.2
47.5°	957.8	985.4	1034.4	1075.8	1091.1
50°	893.4	922.5	974.6	1017.5	1026.7
52.5°	829.0	859.7	914.9	960.8	965.4
55°	761.6	795.3	853.6	898.0	907.2
57.5°	700.3	729.4	792.3	838.2	849.0
60°	632.9	665.1	732.5	775.4	789.2
62.5°	568.5	602.2	672.7	715.6	727.9
65°	501.1	539.4	608.4	658.9	671.2
67.5°	442.9	479.7	553.2	602.2	614.5
70°	375.4	416.8	495.0	545.5	557.8
72.5°	317.2	360.1	438.3	487.3	505.7
75°	254.4	303.4	381.6	433.7	445.9
77.5°	193.1	249.8	329.5	369.3	369.3
80°	137.9	197.7	271.2	289.6	292.7
82.5°	90.4	148.6	200.7	199.2	199.2
85°	52.1	96.5	119.5	116.5	116.5
87.5°	19.9	39.8	42.9	42.9	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)