

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: P389790

Luminaire Tested: **24CZ2-50VHE-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: P389790  
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-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: 4707.2 lumens  
Efficiency: N/A  
Efficacy: 144.0 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

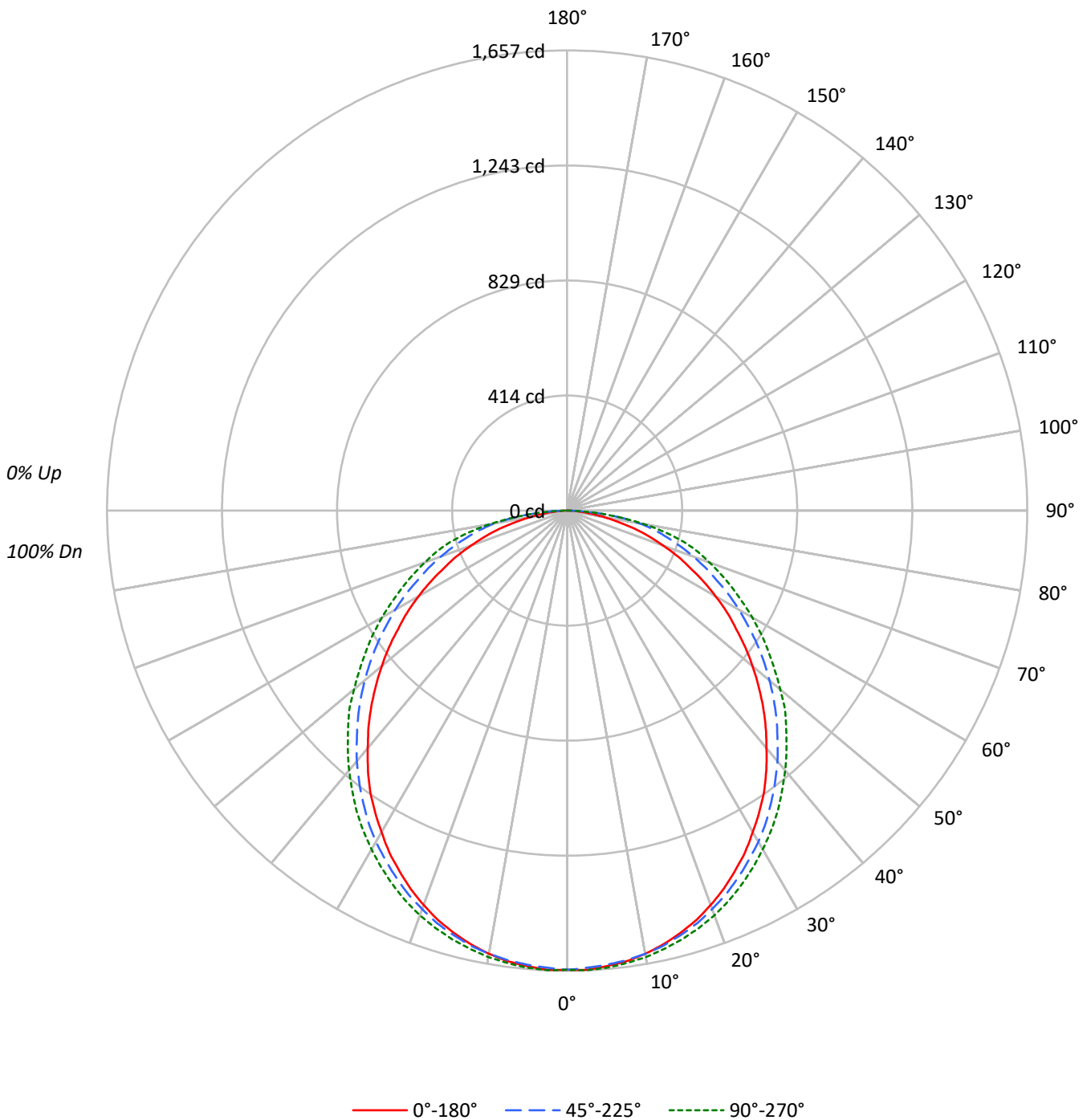
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2225	2225	2225
5°	2223	2217	2232
10°	2214	2214	2231
15°	2193	2204	2226
20°	2164	2186	2220
25°	2124	2164	2206
30°	2077	2140	2188
35°	2031	2105	2171
40°	1962	2069	2146
45°	1898	2029	2122
50°	1825	1990	2097
55°	1743	1954	2076
60°	1662	1923	2072
65°	1557	1890	2085
70°	1441	1900	2141
75°	1290	1935	2262
80°	1043	2050	2213
85°	784	1800	1754



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.6	3.3
10°-20°	447.3	9.5
20°-30°	672.4	14.3
30°-40°	801.0	17.0
40°-50°	819.8	17.4
50°-60°	738.0	15.7
60°-70°	579.6	12.3
70°-80°	376.2	8.0
80°-90°	116.3	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°	1276.3	27.1
0°-40°	2077.3	44.1
0°-60°	3635.1	77.2
0°-90°	4707.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4707.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1654	1654	1654	1654	1654	
5°	1646	1649	1642	1651	1652	156
15°	1574	1579	1582	1595	1598	444
25°	1431	1443	1458	1482	1486	659
35°	1236	1252	1281	1313	1322	771
45°	997	1021	1066	1106	1115	769
55°	743	776	833	876	885	666
65°	489	526	594	643	655	487
75°	248	296	372	423	435	263
85°	51	94	117	114	114	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1653.7	1653.7	1653.7	1653.7	1653.7
2.5°	1655.2	1655.2	1647.7	1655.2	1656.7
5°	1646.2	1649.2	1641.7	1650.7	1652.2
7.5°	1637.2	1637.2	1632.7	1641.7	1643.2
10°	1620.8	1622.3	1620.8	1631.2	1632.7
12.5°	1599.8	1602.8	1604.3	1614.8	1616.3
15°	1574.4	1578.9	1581.9	1595.4	1598.3
17.5°	1546.0	1550.5	1558.0	1572.9	1575.9
20°	1511.6	1517.6	1526.6	1546.0	1550.5
22.5°	1474.2	1480.2	1495.2	1513.1	1520.6
25°	1430.9	1442.8	1457.8	1481.7	1486.2
27.5°	1387.5	1398.0	1417.4	1442.8	1448.8
30°	1336.7	1353.1	1377.1	1402.5	1408.5
32.5°	1287.4	1303.8	1332.2	1359.1	1366.6
35°	1236.5	1251.5	1281.4	1312.8	1321.7
37.5°	1178.2	1197.6	1230.5	1261.9	1270.9
40°	1116.9	1140.8	1178.2	1211.1	1221.6
42.5°	1058.6	1084.0	1121.4	1157.3	1169.2
45°	997.3	1021.2	1066.1	1106.4	1115.4
47.5°	934.5	961.4	1009.2	1049.6	1064.6
50°	871.7	900.1	950.9	992.8	1001.8
52.5°	808.9	838.8	892.6	937.5	942.0
55°	743.1	776.0	832.8	876.2	885.1
57.5°	683.3	711.7	773.0	817.9	828.3
60°	617.5	648.9	714.7	756.6	770.0
62.5°	554.7	587.6	656.4	698.2	710.2
65°	488.9	526.3	593.6	642.9	654.9
67.5°	432.1	468.0	539.8	587.6	599.6
70°	366.3	406.7	482.9	532.3	544.2
72.5°	309.5	351.4	427.6	475.5	493.4
75°	248.2	296.0	372.3	423.1	435.1
77.5°	188.4	243.7	321.5	360.3	360.3
80°	134.6	192.9	264.6	282.6	285.6
82.5°	88.2	145.0	195.9	194.4	194.4
85°	50.8	94.2	116.6	113.6	113.6
87.5°	19.4	38.9	41.9	41.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)