

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: P276716

Luminaire Tested: **24CZ2-45-S-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

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: P276716  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45-S-UNV-L92765-W2A1-U-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3854.7 lumens  
Efficiency: N/A  
Efficacy: 109.9 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

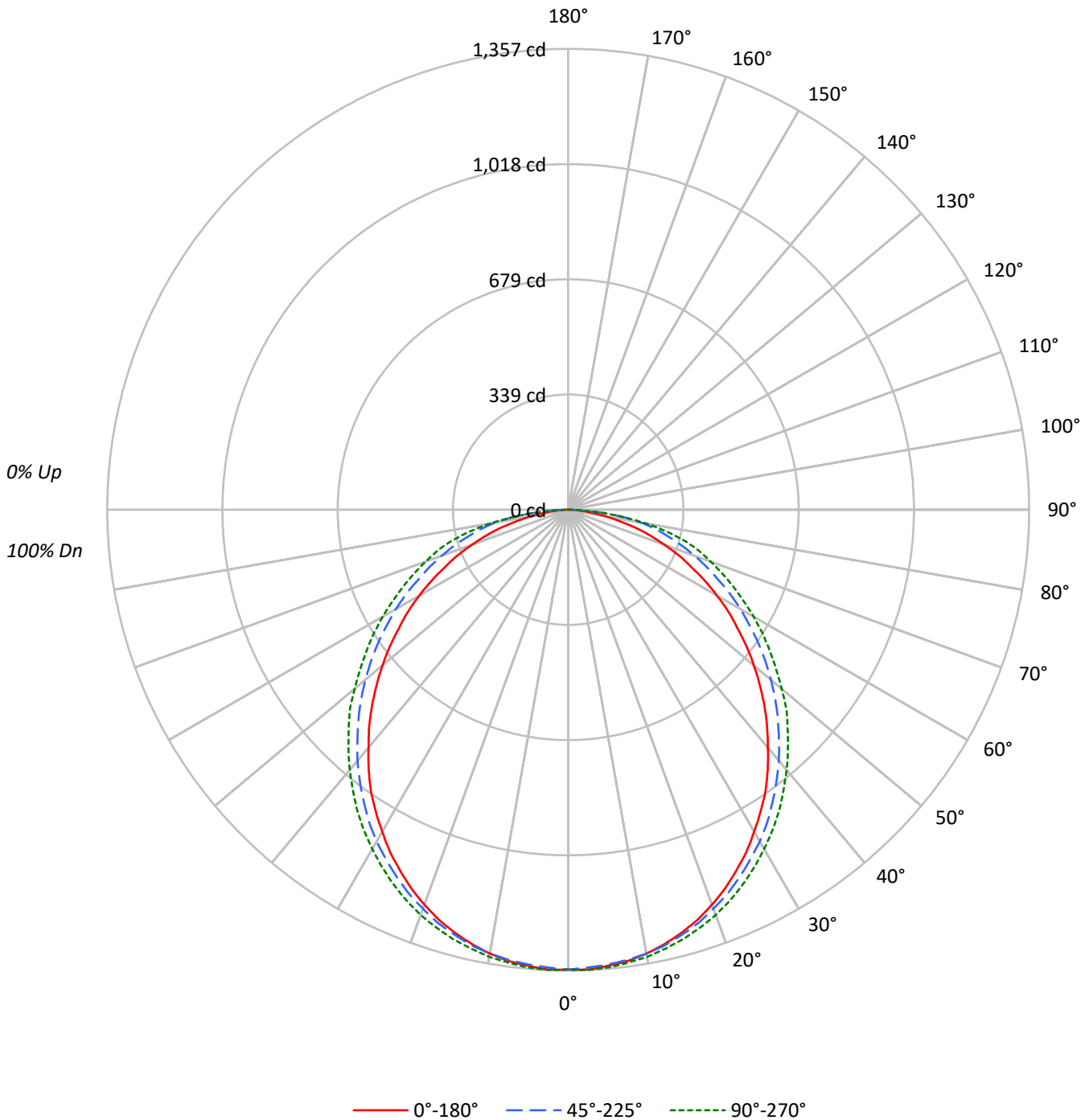
Input Watts (W): 35.061  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276716

CATALOG NUMBER: 24CZ2-45-S-UNV-L92765-W2A1-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276716

CATALOG NUMBER: 24CZ2-45-S-UNV-L92765-W2A1-U-3500K

**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°	1822	1822	1822
5°	1821	1816	1827
10°	1813	1813	1827
15°	1796	1804	1823
20°	1772	1790	1818
25°	1739	1772	1807
30°	1701	1752	1792
35°	1663	1724	1778
40°	1606	1695	1757
45°	1554	1661	1738
50°	1494	1630	1717
55°	1427	1600	1700
60°	1361	1575	1697
65°	1275	1548	1707
70°	1180	1556	1753
75°	1057	1585	1852
80°	854	1679	1812
85°	642	1474	1437



TEST NUMBER: P276716

CATALOG NUMBER: 24CZ2-45-S-UNV-L92765-W2A1-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.2	3.3
10°-20°	366.3	9.5
20°-30°	550.7	14.3
30°-40°	655.9	17.0
40°-50°	671.3	17.4
50°-60°	604.4	15.7
60°-70°	474.6	12.3
70°-80°	308.0	8.0
80°-90°	95.3	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°	1045.2	27.1
0°-40°	1701.1	44.1
0°-60°	2976.8	77.2
0°-90°	3854.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3854.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1354	1354	1354	1354	1354	
5°	1348	1350	1344	1352	1353	128
15°	1289	1293	1295	1306	1309	364
25°	1172	1182	1194	1213	1217	540
35°	1013	1025	1049	1075	1082	632
45°	817	836	873	906	913	630
55°	608	636	682	718	725	546
65°	400	431	486	526	536	399
75°	203	242	305	346	356	215
85°	42	77	96	93	93	50
90°	0	0	0	0	0	



TEST NUMBER: P276716

CATALOG NUMBER: 24CZ2-45-S-UNV-L92765-W2A1-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1354.2	1354.2	1354.2	1354.2	1354.2
2.5°	1355.4	1355.4	1349.3	1355.4	1356.6
5°	1348.1	1350.5	1344.4	1351.7	1353.0
7.5°	1340.7	1340.7	1337.0	1344.4	1345.6
10°	1327.2	1328.5	1327.2	1335.8	1337.0
12.5°	1310.1	1312.6	1313.8	1322.4	1323.6
15°	1289.3	1293.0	1295.4	1306.4	1308.9
17.5°	1266.0	1269.7	1275.8	1288.1	1290.5
20°	1237.9	1242.8	1250.1	1266.0	1269.7
22.5°	1207.3	1212.2	1224.4	1239.1	1245.2
25°	1171.7	1181.5	1193.8	1213.4	1217.1
27.5°	1136.2	1144.8	1160.7	1181.5	1186.4
30°	1094.6	1108.1	1127.7	1148.5	1153.4
32.5°	1054.2	1067.7	1090.9	1113.0	1119.1
35°	1012.6	1024.8	1049.3	1075.0	1082.4
37.5°	964.8	980.7	1007.7	1033.4	1040.7
40°	914.6	934.2	964.8	991.8	1000.3
42.5°	866.9	887.7	918.3	947.7	957.5
45°	816.7	836.3	873.0	906.1	913.4
47.5°	765.2	787.3	826.5	859.5	871.8
50°	713.8	737.1	778.7	813.0	820.3
52.5°	662.4	686.9	731.0	767.7	771.4
55°	608.5	635.5	682.0	717.5	724.8
57.5°	559.6	582.8	633.0	669.7	678.3
60°	505.7	531.4	585.3	619.5	630.6
62.5°	454.3	481.2	537.5	571.8	581.6
65°	400.4	431.0	486.1	526.5	536.3
67.5°	353.9	383.2	442.0	481.2	491.0
70°	300.0	333.0	395.5	435.9	445.7
72.5°	253.5	287.7	350.2	389.4	404.1
75°	203.3	242.4	304.9	346.5	356.3
77.5°	154.3	199.6	263.2	295.1	295.1
80°	110.2	157.9	216.7	231.4	233.9
82.5°	72.2	118.8	160.4	159.2	159.2
85°	41.6	77.1	95.5	93.1	93.1
87.5°	15.9	31.8	34.3	34.3	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)