

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: P276709

Luminaire Tested: **24CZ2-40-S-UNV-L92765-W2A1-U-4500K**

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: P276709  
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: 24CZ2-40-S-UNV-L92765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3646.0 lumens  
Efficiency: N/A  
Efficacy: 117.7 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

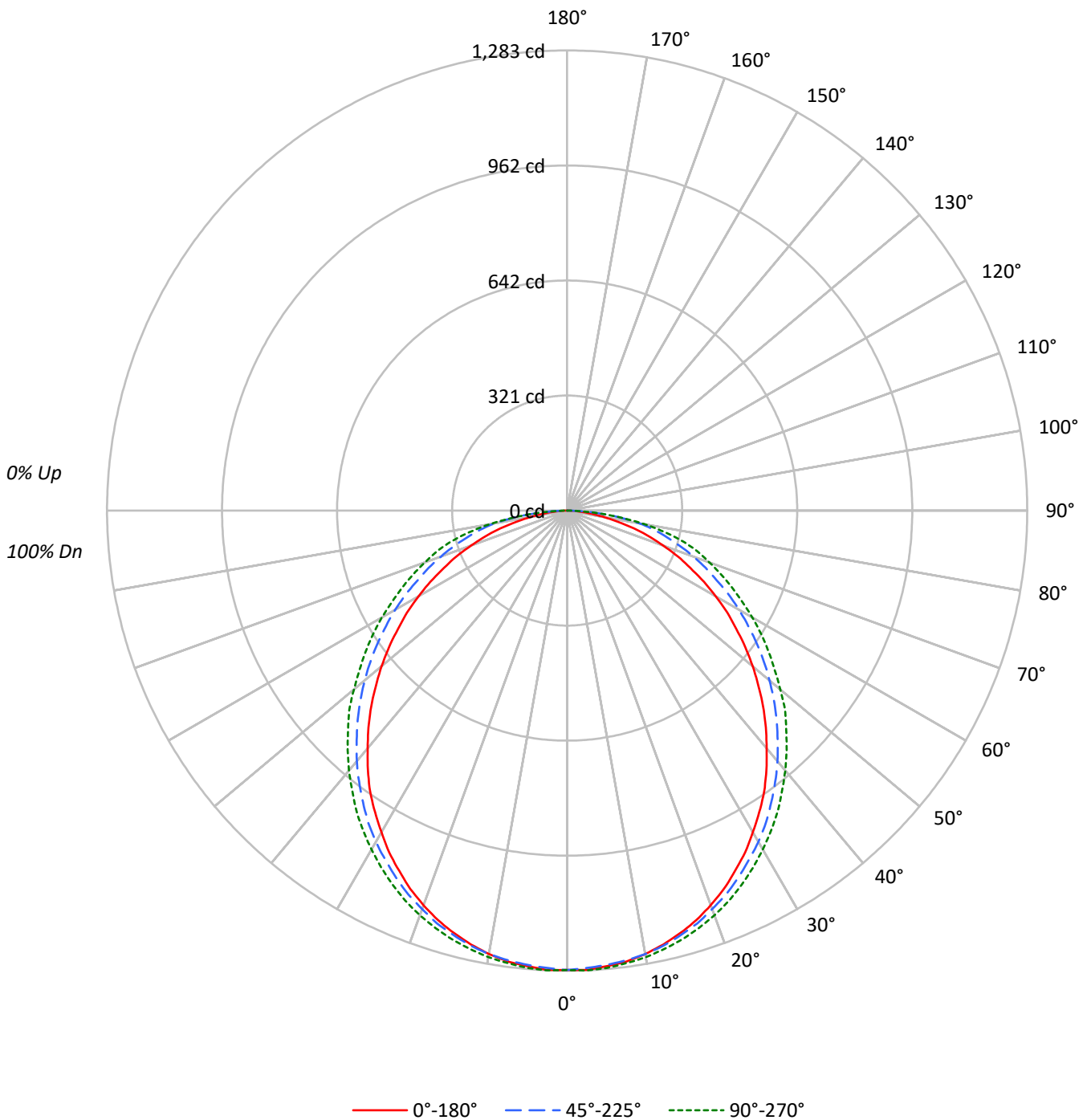
Input Watts (W): 30.969  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276709

CATALOG NUMBER: 24CZ2-40-S-UNV-L92765-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276709

CATALOG NUMBER: 24CZ2-40-S-UNV-L92765-W2A1-U-4500K

**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°	1723	1723	1723
5°	1722	1717	1728
10°	1715	1715	1728
15°	1699	1707	1724
20°	1676	1693	1719
25°	1645	1676	1709
30°	1608	1657	1695
35°	1573	1630	1682
40°	1519	1603	1662
45°	1470	1571	1644
50°	1413	1542	1624
55°	1350	1513	1608
60°	1287	1490	1605
65°	1206	1464	1615
70°	1116	1472	1658
75°	999	1499	1752
80°	807	1588	1714
85°	608	1394	1359



TEST NUMBER: P276709

CATALOG NUMBER: 24CZ2-40-S-UNV-L92765-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.3	3.3
10°-20°	346.5	9.5
20°-30°	520.8	14.3
30°-40°	620.4	17.0
40°-50°	635.0	17.4
50°-60°	571.6	15.7
60°-70°	448.9	12.3
70°-80°	291.4	8.0
80°-90°	90.1	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°	988.6	27.1
0°-40°	1609.0	44.1
0°-60°	2815.6	77.2
0°-90°	3646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3646.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1275	1277	1272	1278	1280	121
15°	1220	1223	1225	1236	1238	344
25°	1108	1118	1129	1148	1151	511
35°	958	969	992	1017	1024	597
45°	772	791	826	857	864	596
55°	576	601	645	679	686	516
65°	379	408	460	498	507	377
75°	192	229	288	328	337	203
85°	39	73	90	88	88	48
90°	0	0	0	0	0	



TEST NUMBER: P276709

CATALOG NUMBER: 24CZ2-40-S-UNV-L92765-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1280.9	1280.9	1280.9	1280.9	1280.9
2.5°	1282.0	1282.0	1276.2	1282.0	1283.2
5°	1275.1	1277.4	1271.6	1278.5	1279.7
7.5°	1268.1	1268.1	1264.6	1271.6	1272.7
10°	1255.4	1256.5	1255.4	1263.5	1264.6
12.5°	1239.2	1241.5	1242.6	1250.7	1251.9
15°	1219.5	1222.9	1225.3	1235.7	1238.0
17.5°	1197.5	1200.9	1206.7	1218.3	1220.6
20°	1170.8	1175.5	1182.4	1197.5	1200.9
22.5°	1141.9	1146.5	1158.1	1172.0	1177.8
25°	1108.3	1117.6	1129.1	1147.7	1151.1
27.5°	1074.7	1082.8	1097.9	1117.6	1122.2
30°	1035.3	1048.1	1066.6	1086.3	1090.9
32.5°	997.1	1009.9	1031.9	1052.7	1058.5
35°	957.7	969.3	992.5	1016.8	1023.8
37.5°	912.6	927.6	953.1	977.4	984.4
40°	865.1	883.6	912.6	938.1	946.2
42.5°	819.9	839.6	868.6	896.4	905.6
45°	772.4	791.0	825.7	857.0	863.9
47.5°	723.8	744.7	781.7	813.0	824.6
50°	675.2	697.2	736.5	769.0	775.9
52.5°	626.5	649.7	691.4	726.1	729.6
55°	575.6	601.1	645.1	678.6	685.6
57.5°	529.2	551.3	598.7	633.5	641.6
60°	478.3	502.6	553.6	586.0	596.4
62.5°	429.7	455.1	508.4	540.8	550.1
65°	378.7	407.6	459.8	498.0	507.2
67.5°	334.7	362.5	418.1	455.1	464.4
70°	283.7	315.0	374.1	412.3	421.5
72.5°	239.7	272.2	331.2	368.3	382.2
75°	192.2	229.3	288.4	327.7	337.0
77.5°	145.9	188.8	249.0	279.1	279.1
80°	104.2	149.4	205.0	218.9	221.2
82.5°	68.3	112.3	151.7	150.6	150.6
85°	39.4	73.0	90.3	88.0	88.0
87.5°	15.1	30.1	32.4	32.4	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)