

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: P276104

Luminaire Tested: **24CZ2-60HE-UNV-L82765-W2A1-U-6500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276104  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-UNV-L82765-W2A1-U-6500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 6500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5964.5 lumens  
Efficiency: N/A  
Efficacy: 129.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

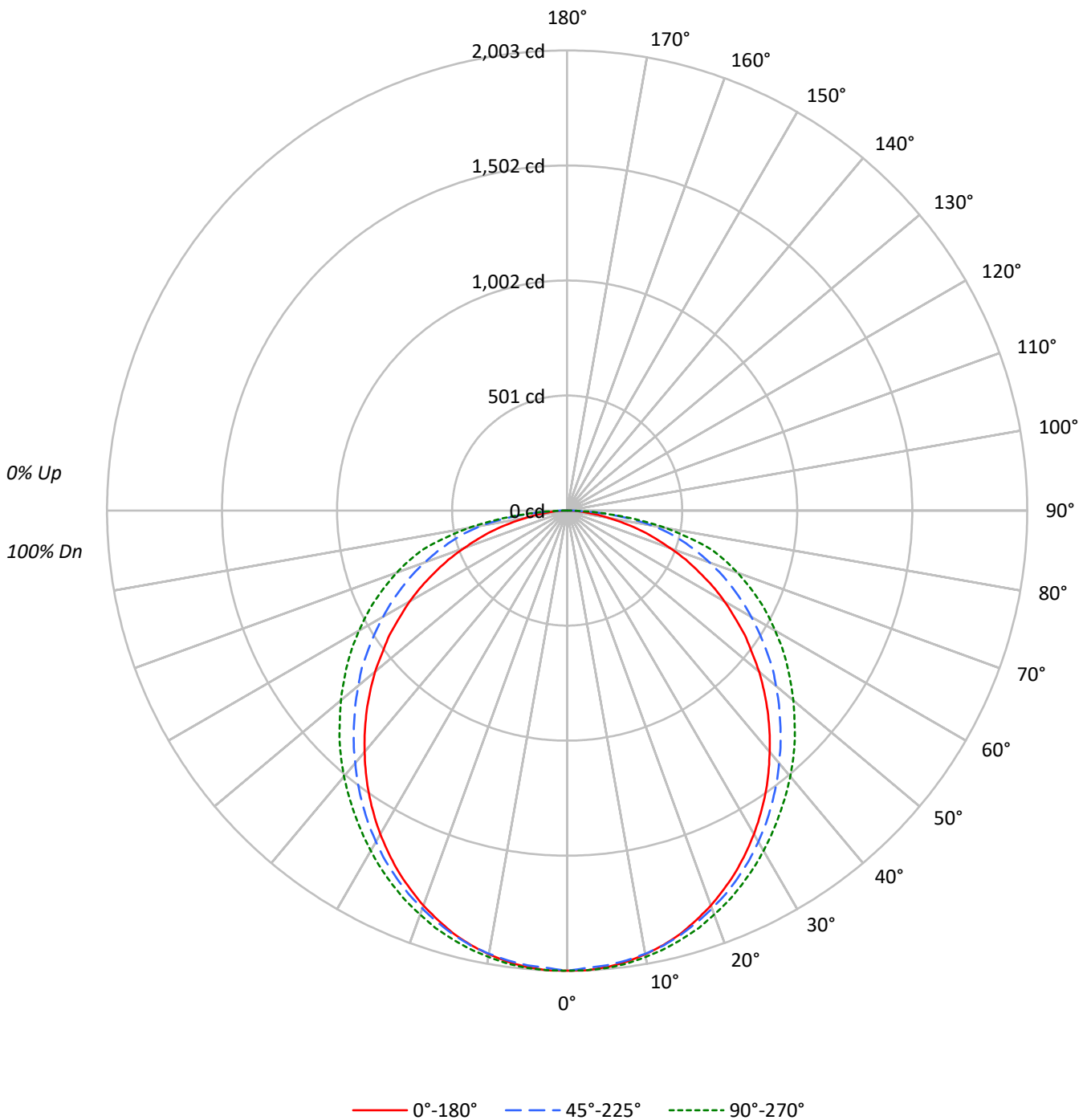
Input Watts (W): 46.221  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276104

CATALOG NUMBER: 24CZ2-60HE-UNV-L82765-W2A1-U-6500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276104

CATALOG NUMBER: 24CZ2-60HE-UNV-L82765-W2A1-U-6500K

**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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	2694	2694	2694
5°	2694	2683	2699
10°	2679	2676	2695
15°	2656	2662	2690
20°	2619	2639	2679
25°	2577	2615	2669
30°	2527	2586	2657
35°	2472	2554	2648
40°	2409	2521	2654
45°	2348	2496	2667
50°	2283	2483	2692
55°	2213	2479	2741
60°	2127	2491	2812
65°	2015	2529	2934
70°	1872	2592	3101
75°	1708	2721	3363
80°	1403	2930	3363
85°	1076	2705	2888



TEST NUMBER: P276104

CATALOG NUMBER: 24CZ2-60HE-UNV-L82765-W2A1-U-6500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.4	3.2
10°-20°	540.7	9.1
20°-30°	813.7	13.6
30°-40°	975.1	16.3
40°-50°	1016.2	17.0
50°-60°	945.4	15.9
60°-70°	778.7	13.1
70°-80°	530.3	8.9
80°-90°	175.1	2.9
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°	1543.8	25.9
0°-40°	2518.9	42.2
0°-60°	4480.5	75.1
0°-90°	5964.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5964.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2003	2003	2003	2003	2003	
5°	1995	1995	1987	1997	1999	189
15°	1907	1909	1911	1929	1931	537
25°	1736	1744	1762	1792	1798	799
35°	1505	1523	1555	1596	1612	941
45°	1234	1260	1312	1378	1401	952
55°	944	975	1057	1141	1168	841
65°	633	687	794	888	922	628
75°	328	402	524	617	647	346
85°	70	135	175	187	187	86
90°	0	0	0	0	0	



TEST NUMBER: P276104

CATALOG NUMBER: 24CZ2-60HE-UNV-L82765-W2A1-U-6500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2002.6	2002.6	2002.6	2002.6	2002.6
2.5°	2002.6	2002.6	1992.6	2002.6	2002.6
5°	1994.6	1994.6	1986.6	1996.6	1998.6
7.5°	1980.7	1982.7	1974.7	1986.6	1988.6
10°	1960.8	1962.8	1958.8	1970.7	1972.7
12.5°	1936.9	1938.9	1938.9	1952.8	1954.8
15°	1907.0	1909.0	1911.0	1928.9	1930.9
17.5°	1869.2	1875.2	1879.2	1901.0	1905.0
20°	1829.4	1835.4	1843.3	1867.2	1871.2
22.5°	1783.6	1791.6	1805.5	1831.4	1837.3
25°	1735.8	1743.8	1761.7	1791.6	1797.5
27.5°	1682.1	1694.0	1715.9	1747.8	1755.7
30°	1626.3	1638.3	1664.2	1698.0	1709.9
32.5°	1566.6	1582.5	1612.4	1650.2	1662.2
35°	1504.9	1522.8	1554.7	1596.5	1612.4
37.5°	1439.2	1459.1	1497.0	1542.7	1562.6
40°	1371.5	1395.4	1435.2	1489.0	1510.9
42.5°	1303.9	1325.8	1375.5	1433.3	1457.1
45°	1234.2	1260.1	1311.8	1377.5	1401.4
47.5°	1162.5	1188.4	1250.1	1319.8	1341.7
50°	1090.9	1116.7	1186.4	1260.1	1285.9
52.5°	1013.2	1047.1	1126.7	1200.3	1226.2
55°	943.6	975.4	1057.0	1140.6	1168.5
57.5°	863.9	901.8	991.3	1078.9	1108.8
60°	790.3	830.1	925.6	1015.2	1045.1
62.5°	714.6	758.4	860.0	951.5	985.4
65°	633.0	686.8	794.3	887.8	921.7
67.5°	559.4	615.1	728.6	824.1	854.0
70°	475.8	543.4	658.9	754.4	788.3
72.5°	404.1	471.8	593.2	686.8	720.6
75°	328.5	402.1	523.5	617.1	647.0
77.5°	252.8	334.4	455.9	527.5	537.5
80°	181.1	266.7	378.2	420.0	434.0
82.5°	127.4	205.0	278.7	306.6	314.5
85°	69.7	135.4	175.2	187.1	187.1
87.5°	29.9	57.7	69.7	71.7	73.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)