

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: P276065

Luminaire Tested: **24CZ2-40HE-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276065  
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: 24CZ2-40HE-UNV-L82765-W2A1-U-5000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3967.5 lumens  
Efficiency: N/A  
Efficacy: 137.2 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

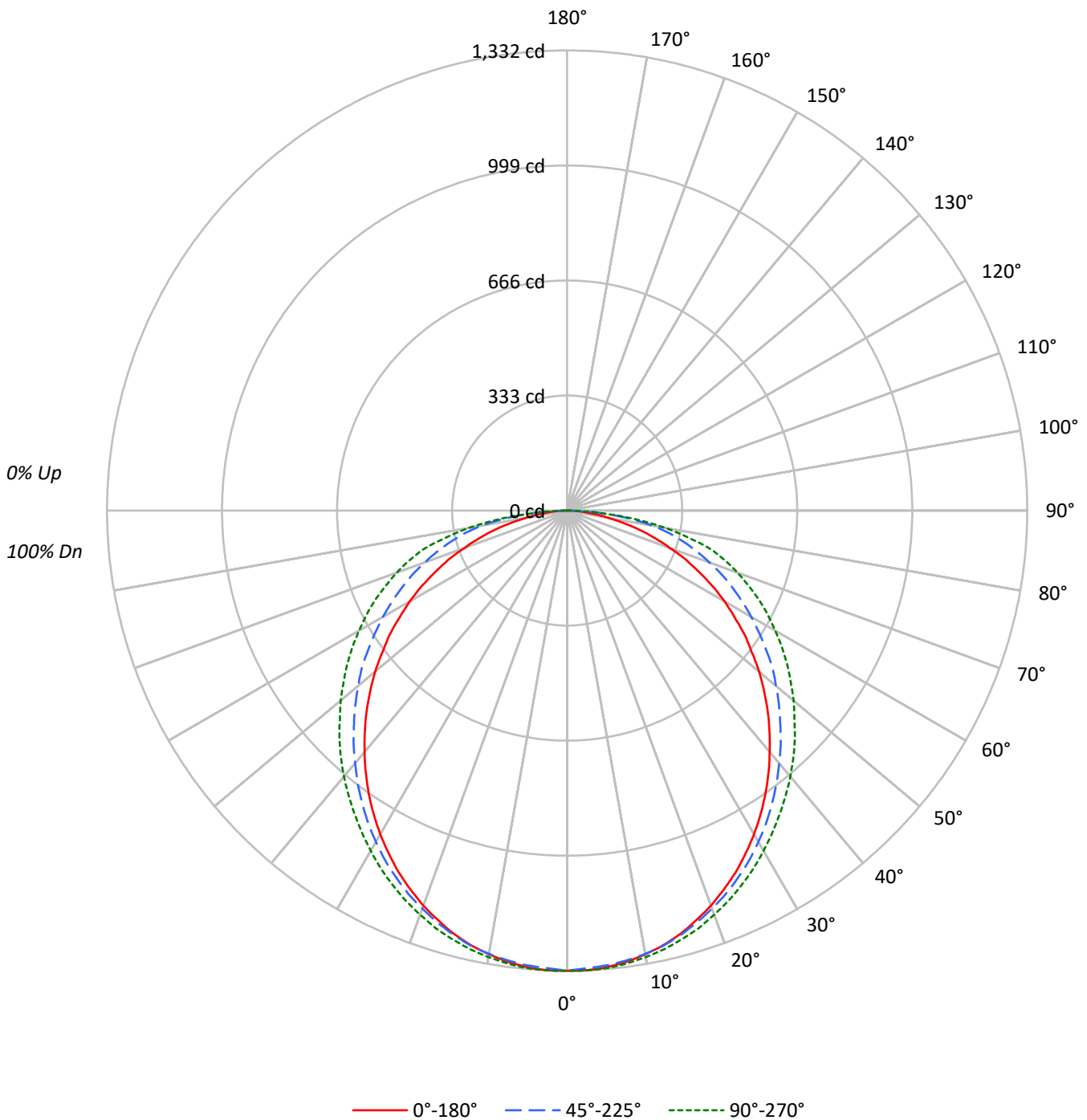
Input Watts (W): 28.923  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276065

CATALOG NUMBER: 24CZ2-40HE-UNV-L82765-W2A1-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P276065

CATALOG NUMBER: 24CZ2-40HE-UNV-L82765-W2A1-U-5000K

**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	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°	1792	1792	1792
5°	1792	1785	1796
10°	1782	1780	1793
15°	1767	1771	1789
20°	1742	1756	1782
25°	1714	1740	1775
30°	1681	1720	1767
35°	1644	1699	1762
40°	1602	1677	1765
45°	1562	1660	1774
50°	1519	1652	1791
55°	1472	1649	1823
60°	1415	1657	1871
65°	1341	1682	1952
70°	1245	1724	2063
75°	1136	1810	2237
80°	934	1949	2237
85°	715	1798	1922



TEST NUMBER: P276065

CATALOG NUMBER: 24CZ2-40HE-UNV-L82765-W2A1-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.0	3.2
10°-20°	359.7	9.1
20°-30°	541.2	13.6
30°-40°	648.6	16.3
40°-50°	675.9	17.0
50°-60°	628.9	15.9
60°-70°	518.0	13.1
70°-80°	352.8	8.9
80°-90°	116.5	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°	1026.9	25.9
0°-40°	1675.5	42.2
0°-60°	2980.4	75.1
0°-90°	3967.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3967.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1332	1332	1332	1332	1332	
5°	1327	1327	1322	1328	1329	126
15°	1268	1270	1271	1283	1284	357
25°	1155	1160	1172	1192	1196	532
35°	1001	1013	1034	1062	1073	626
45°	821	838	873	916	932	633
55°	628	649	703	759	777	559
65°	421	457	528	591	613	418
75°	218	268	348	410	430	230
85°	46	90	116	124	124	57
90°	0	0	0	0	0	



TEST NUMBER: P276065

CATALOG NUMBER: 24CZ2-40HE-UNV-L82765-W2A1-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1332.1	1332.1	1332.1	1332.1	1332.1
2.5°	1332.1	1332.1	1325.5	1332.1	1332.1
5°	1326.8	1326.8	1321.5	1328.1	1329.4
7.5°	1317.5	1318.8	1313.5	1321.5	1322.8
10°	1304.3	1305.6	1303.0	1310.9	1312.2
12.5°	1288.4	1289.7	1289.7	1299.0	1300.3
15°	1268.5	1269.8	1271.2	1283.1	1284.4
17.5°	1243.4	1247.3	1250.0	1264.6	1267.2
20°	1216.9	1220.9	1226.2	1242.0	1244.7
22.5°	1186.4	1191.7	1201.0	1218.2	1222.2
25°	1154.6	1159.9	1171.9	1191.7	1195.7
27.5°	1118.9	1126.8	1141.4	1162.6	1167.9
30°	1081.8	1089.8	1107.0	1129.5	1137.4
32.5°	1042.1	1052.7	1072.6	1097.7	1105.7
35°	1001.0	1013.0	1034.2	1062.0	1072.6
37.5°	957.4	970.6	995.8	1026.2	1039.4
40°	912.3	928.2	954.7	990.5	1005.0
42.5°	867.3	881.9	915.0	953.4	969.3
45°	821.0	838.2	872.6	916.3	932.2
47.5°	773.3	790.5	831.6	877.9	892.5
50°	725.6	742.8	789.2	838.2	855.4
52.5°	674.0	696.5	749.5	798.5	815.7
55°	627.6	648.8	703.1	758.7	777.3
57.5°	574.7	599.8	659.4	717.7	737.5
60°	525.7	552.2	615.7	675.3	695.2
62.5°	475.4	504.5	572.0	632.9	655.4
65°	421.1	456.8	528.3	590.6	613.1
67.5°	372.1	409.2	484.6	548.2	568.1
70°	316.5	361.5	438.3	501.8	524.4
72.5°	268.8	313.8	394.6	456.8	479.3
75°	218.5	267.5	348.2	410.5	430.3
77.5°	168.2	222.5	303.2	350.9	357.5
80°	120.5	177.4	251.6	279.4	288.7
82.5°	84.7	136.4	185.4	203.9	209.2
85°	46.3	90.0	116.5	124.5	124.5
87.5°	19.9	38.4	46.3	47.7	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)