

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: P276046

Luminaire Tested: **24CZ2-30HE-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276046  
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: 24CZ2-30HE-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2950.6 lumens  
Efficiency: N/A  
Efficacy: 147.6 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

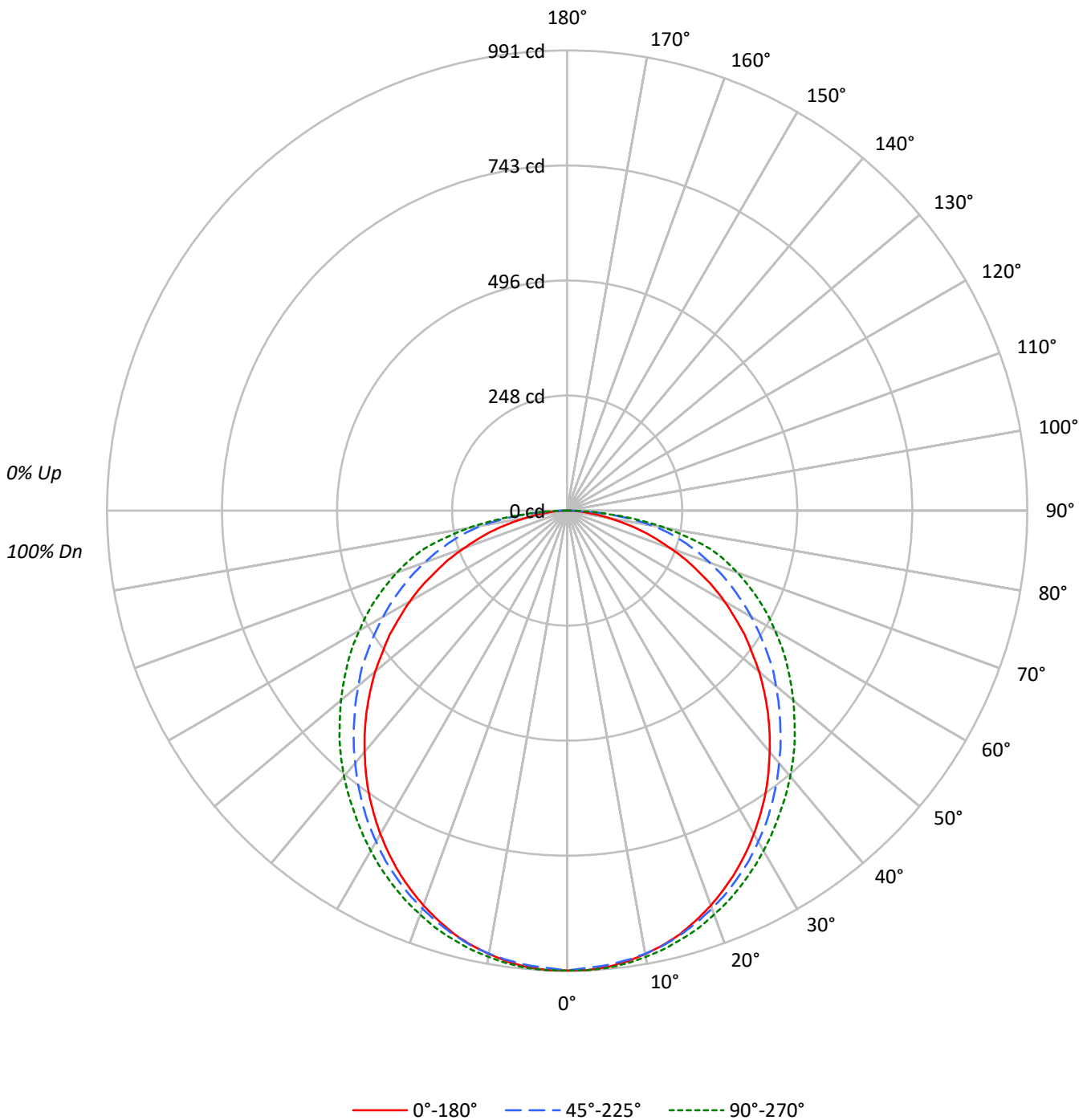
Input Watts (W): 19.995  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276046

CATALOG NUMBER: 24CZ2-30HE-UNV-L82765-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276046

CATALOG NUMBER: 24CZ2-30HE-UNV-L82765-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	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°	1333	1333	1333
5°	1333	1327	1335
10°	1325	1324	1333
15°	1314	1317	1331
20°	1296	1306	1325
25°	1275	1294	1320
30°	1250	1279	1314
35°	1223	1263	1310
40°	1192	1247	1313
45°	1162	1235	1319
50°	1129	1229	1331
55°	1095	1227	1356
60°	1052	1232	1391
65°	997	1251	1451
70°	926	1282	1534
75°	845	1346	1664
80°	694	1450	1664
85°	533	1338	1430



TEST NUMBER: P276046

CATALOG NUMBER: 24CZ2-30HE-UNV-L82765-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	3.2
10°-20°	267.5	9.1
20°-30°	402.5	13.6
30°-40°	482.4	16.3
40°-50°	502.7	17.0
50°-60°	467.7	15.9
60°-70°	385.2	13.1
70°-80°	262.3	8.9
80°-90°	86.6	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°	763.7	25.9
0°-40°	1246.1	42.2
0°-60°	2216.4	75.1
0°-90°	2950.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2950.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	987	987	983	988	989	94
15°	943	944	945	954	955	266
25°	859	863	872	886	889	395
35°	744	753	769	790	798	465
45°	610	623	649	681	693	471
55°	467	482	523	564	578	416
65°	313	340	393	439	456	311
75°	162	199	259	305	320	171
85°	34	67	87	93	93	43
90°	0	0	0	0	0	



TEST NUMBER: P276046

CATALOG NUMBER: 24CZ2-30HE-UNV-L82765-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	990.6	990.6	990.6	990.6	990.6
2.5°	990.6	990.6	985.7	990.6	990.6
5°	986.7	986.7	982.8	987.7	988.7
7.5°	979.8	980.8	976.9	982.8	983.8
10°	970.0	971.0	969.0	974.9	975.9
12.5°	958.1	959.1	959.1	966.0	967.0
15°	943.4	944.4	945.3	954.2	955.2
17.5°	924.7	927.6	929.6	940.4	942.4
20°	905.0	907.9	911.9	923.7	925.7
22.5°	882.3	886.3	893.2	906.0	908.9
25°	858.7	862.6	871.5	886.3	889.2
27.5°	832.1	838.0	848.8	864.6	868.5
30°	804.5	810.4	823.2	840.0	845.9
32.5°	775.0	782.9	797.6	816.3	822.3
35°	744.5	753.3	769.1	789.8	797.6
37.5°	712.0	721.8	740.5	763.2	773.0
40°	678.5	690.3	710.0	736.6	747.4
42.5°	645.0	655.8	680.5	709.0	720.8
45°	610.5	623.3	648.9	681.4	693.3
47.5°	575.1	587.9	618.4	652.9	663.7
50°	539.6	552.4	586.9	623.3	636.1
52.5°	501.2	518.0	557.4	593.8	606.6
55°	466.8	482.5	522.9	564.3	578.0
57.5°	427.4	446.1	490.4	533.7	548.5
60°	390.9	410.6	457.9	502.2	517.0
62.5°	353.5	375.2	425.4	470.7	487.4
65°	313.1	339.7	392.9	439.2	455.9
67.5°	276.7	304.3	360.4	407.7	422.5
70°	235.4	268.8	325.9	373.2	390.0
72.5°	199.9	233.4	293.5	339.7	356.5
75°	162.5	198.9	259.0	305.3	320.0
77.5°	125.1	165.4	225.5	261.0	265.9
80°	89.6	132.0	187.1	207.8	214.7
82.5°	63.0	101.4	137.9	151.6	155.6
85°	34.5	67.0	86.7	92.6	92.6
87.5°	14.8	28.6	34.5	35.5	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)