

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: P276610

Luminaire Tested: **24CZ2-35HE-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: P276610  
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: 24CZ2-35HE-S-UNV-L92765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 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: 3168.9 lumens  
Efficiency: N/A  
Efficacy: 128.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

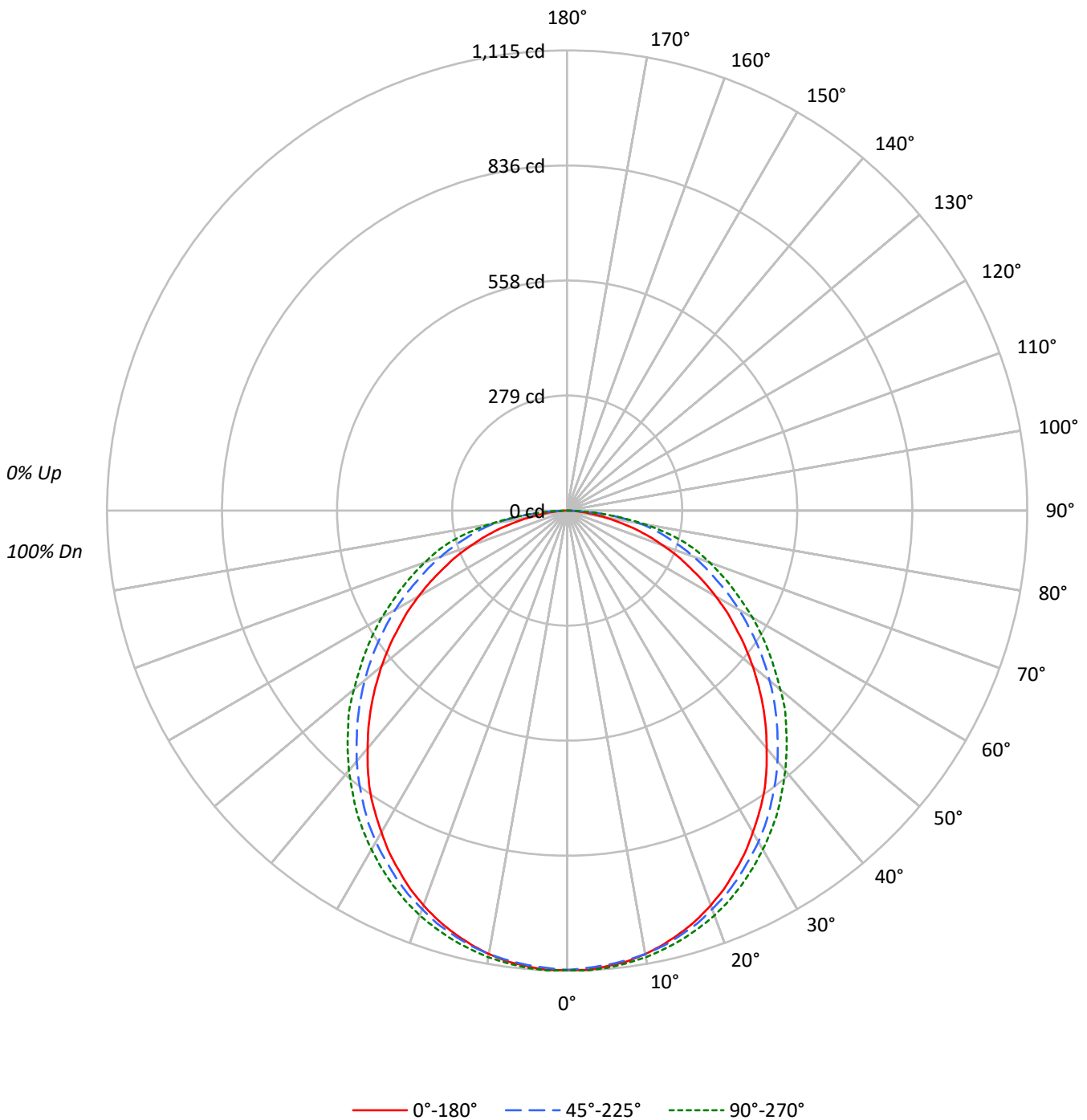
Input Watts (W): 24.645  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276610

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L92765-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276610

CATALOG NUMBER: 24CZ2-35HE-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°	1498	1498	1498
5°	1497	1493	1502
10°	1491	1491	1502
15°	1476	1483	1499
20°	1457	1472	1495
25°	1430	1457	1485
30°	1398	1440	1473
35°	1367	1417	1462
40°	1321	1393	1444
45°	1278	1366	1429
50°	1228	1340	1412
55°	1174	1315	1398
60°	1119	1295	1395
65°	1048	1272	1404
70°	970	1279	1441
75°	869	1303	1523
80°	702	1381	1490
85°	528	1212	1181



TEST NUMBER: P276610

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L92765-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.4	3.3
10°-20°	301.1	9.5
20°-30°	452.7	14.3
30°-40°	539.2	17.0
40°-50°	551.9	17.4
50°-60°	496.8	15.7
60°-70°	390.2	12.3
70°-80°	253.2	8.0
80°-90°	78.3	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°	859.2	27.1
0°-40°	1398.4	44.1
0°-60°	2447.1	77.2
0°-90°	3168.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3168.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1113	1113	1113	1113	1113	
5°	1108	1110	1105	1111	1112	105
15°	1060	1063	1065	1074	1076	299
25°	963	971	981	998	1000	444
35°	832	842	863	884	890	519
45°	671	688	718	745	751	518
55°	500	522	561	590	596	448
65°	329	354	400	433	441	328
75°	167	199	251	285	293	177
85°	34	63	78	76	76	41
90°	0	0	0	0	0	



TEST NUMBER: P276610

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L92765-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1113.2	1113.2	1113.2	1113.2	<i>1113.2</i>
2.5°	<i>1114.2</i>	<i>1114.2</i>	<i>1109.2</i>	<i>1114.2</i>	<i>1115.3</i>
5°	1108.2	1110.2	1105.2	1111.2	<i>1112.2</i>
7.5°	1102.2	1102.2	1099.1	1105.2	<i>1106.2</i>
10°	1091.1	1092.1	1091.1	1098.1	<i>1099.1</i>
12.5°	1077.0	1079.0	1080.0	1087.1	<i>1088.1</i>
15°	1059.9	1062.9	1064.9	1074.0	<i>1076.0</i>
17.5°	1040.8	1043.8	1048.8	1058.9	<i>1060.9</i>
20°	1017.6	1021.6	1027.7	1040.8	<i>1043.8</i>
22.5°	992.5	996.5	1006.5	1018.6	<i>1023.7</i>
25°	963.3	971.3	981.4	997.5	<i>1000.5</i>
27.5°	934.1	941.1	954.2	971.3	<i>975.3</i>
30°	899.9	910.9	927.0	944.1	<i>948.2</i>
32.5°	866.6	877.7	896.8	914.9	<i>920.0</i>
35°	832.4	842.5	862.6	883.7	<i>889.8</i>
37.5°	793.2	806.2	828.4	849.5	<i>855.6</i>
40°	751.9	768.0	793.2	815.3	<i>822.3</i>
42.5°	712.6	729.7	754.9	779.1	<i>787.1</i>
45°	671.4	687.5	717.7	744.8	<i>750.9</i>
47.5°	629.1	647.2	679.4	706.6	<i>716.7</i>
50°	586.8	605.9	640.2	668.3	<i>674.4</i>
52.5°	544.5	564.7	600.9	631.1	<i>634.1</i>
55°	500.3	522.4	560.6	589.8	<i>595.9</i>
57.5°	460.0	479.1	520.4	550.6	<i>557.6</i>
60°	415.7	436.8	481.1	509.3	<i>518.4</i>
62.5°	373.4	395.6	441.9	470.1	<i>478.1</i>
65°	329.1	354.3	399.6	432.8	<i>440.9</i>
67.5°	290.9	315.0	363.4	395.6	<i>403.6</i>
70°	246.6	273.8	325.1	358.3	<i>366.4</i>
72.5°	208.4	236.5	287.9	320.1	<i>332.2</i>
75°	167.1	199.3	250.6	284.9	<i>292.9</i>
77.5°	126.8	164.1	216.4	242.6	<i>242.6</i>
80°	90.6	129.8	178.2	190.2	<i>192.3</i>
82.5°	59.4	97.6	131.9	130.9	<i>130.9</i>
85°	34.2	63.4	78.5	76.5	<i>76.5</i>
87.5°	13.1	26.2	28.2	28.2	<i>27.2</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)