

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: P276493

Luminaire Tested: **24CZ2-45HE-S-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276493  
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: 24CZ2-45HE-S-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4528.7 lumens  
Efficiency: N/A  
Efficacy: 141.6 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

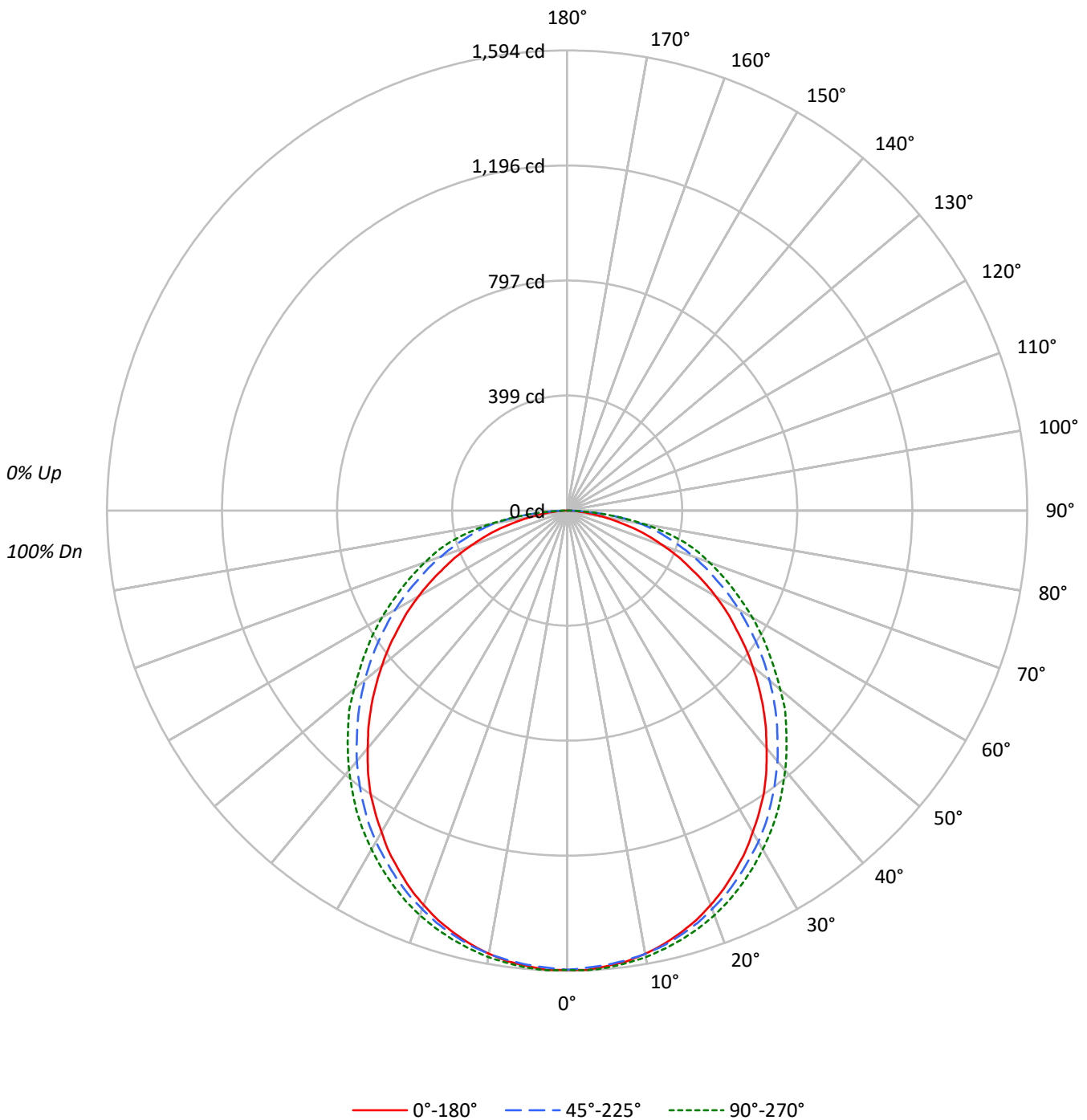
Input Watts (W): 31.992  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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°	2141	2141	2141
5°	2139	2133	2147
10°	2130	2130	2146
15°	2110	2120	2142
20°	2082	2103	2136
25°	2044	2082	2123
30°	1998	2058	2105
35°	1954	2025	2089
40°	1887	1991	2064
45°	1826	1952	2042
50°	1755	1915	2017
55°	1677	1879	1998
60°	1599	1850	1993
65°	1498	1818	2006
70°	1386	1828	2060
75°	1241	1862	2176
80°	1003	1973	2128
85°	755	1732	1687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.6	3.3
10°-20°	430.4	9.5
20°-30°	646.9	14.3
30°-40°	770.6	17.0
40°-50°	788.7	17.4
50°-60°	710.0	15.7
60°-70°	557.6	12.3
70°-80°	361.9	8.0
80°-90°	111.9	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°	1227.9	27.1
0°-40°	1998.5	44.1
0°-60°	3497.2	77.2
0°-90°	4528.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4528.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1584	1587	1579	1588	1590	150
15°	1515	1519	1522	1535	1538	427
25°	1377	1388	1402	1426	1430	634
35°	1190	1204	1233	1263	1272	742
45°	960	982	1026	1064	1073	740
55°	715	747	801	843	852	641
65°	470	506	571	618	630	468
75°	239	285	358	407	419	253
85°	49	91	112	109	109	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1590.9	1590.9	1590.9	1590.9	1590.9
2.5°	1592.4	1592.4	1585.2	1592.4	1593.8
5°	1583.7	1586.6	1579.4	1588.1	1589.5
7.5°	1575.1	1575.1	1570.8	1579.4	1580.9
10°	1559.3	1560.7	1559.3	1569.4	1570.8
12.5°	1539.2	1542.0	1543.5	1553.5	1555.0
15°	1514.7	1519.0	1521.9	1534.8	1537.7
17.5°	1487.4	1491.7	1498.9	1513.3	1516.1
20°	1454.3	1460.0	1468.7	1487.4	1491.7
22.5°	1418.3	1424.1	1438.5	1455.7	1462.9
25°	1376.6	1388.1	1402.5	1425.5	1429.8
27.5°	1334.9	1345.0	1363.7	1388.1	1393.9
30°	1286.0	1301.8	1324.8	1349.3	1355.0
32.5°	1238.5	1254.3	1281.7	1307.6	1314.8
35°	1189.6	1204.0	1232.8	1263.0	1271.6
37.5°	1133.5	1152.2	1183.9	1214.1	1222.7
40°	1074.5	1097.5	1133.5	1165.2	1175.2
42.5°	1018.4	1042.9	1078.8	1113.4	1124.9
45°	959.5	982.5	1025.6	1064.5	1073.1
47.5°	899.0	924.9	971.0	1009.8	1024.2
50°	838.6	866.0	914.9	955.1	963.8
52.5°	778.2	807.0	858.8	901.9	906.2
55°	714.9	746.6	801.2	842.9	851.6
57.5°	657.4	684.7	743.7	786.8	796.9
60°	594.1	624.3	687.6	727.9	740.8
62.5°	533.7	565.3	631.5	671.8	683.3
65°	470.4	506.3	571.1	618.5	630.0
67.5°	415.7	450.2	519.3	565.3	576.8
70°	352.4	391.3	464.6	512.1	523.6
72.5°	297.8	338.0	411.4	457.4	474.7
75°	238.8	284.8	358.2	407.1	418.6
77.5°	181.2	234.5	309.3	346.7	346.7
80°	129.5	185.6	254.6	271.9	274.7
82.5°	84.9	139.5	188.4	187.0	187.0
85°	48.9	90.6	112.2	109.3	109.3
87.5°	18.7	37.4	40.3	40.3	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)