

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: P881204

Luminaire Tested: **24CZ2-45VHE-S-UNV-B40**

Issue Date: 10/2/2024

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: P881204  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P473969)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 10/2/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-S-UNV-B40  
Description: 2X4 4500 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 4000K CCT AND SMOOTH LENS

Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

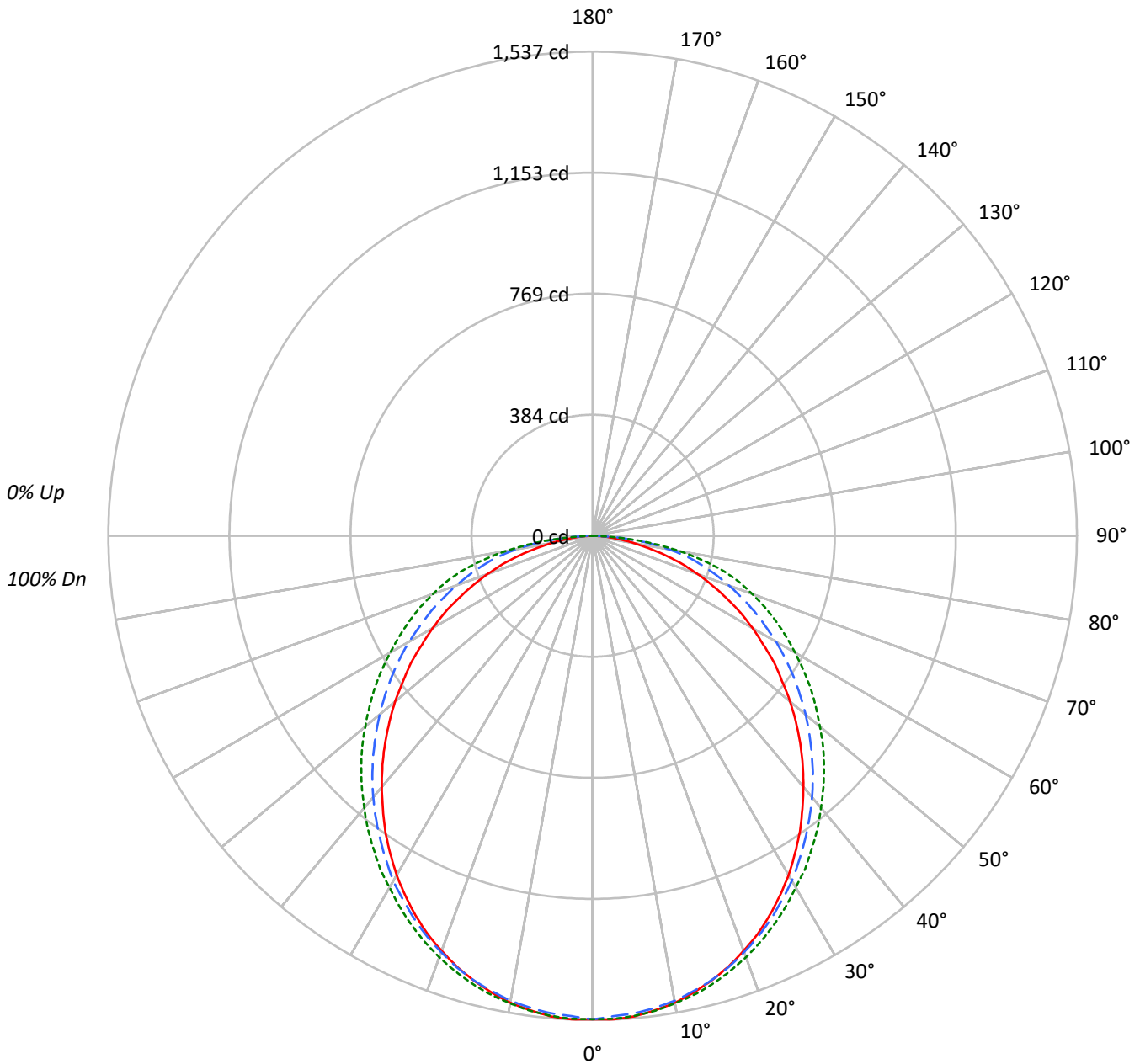
Lumens per Lamp: N/A  
Luminaire Lumens: 4397.0 lumens  
Efficiency: N/A  
Efficacy: 129.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 34  
Input Voltage (V): NR  
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	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	105	101	97	93	97	93	90	93	90	87	89	87	85	83								
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68								
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57								
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49								
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42								
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37								
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32								
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29								
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26								
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24								

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

	0°	45°	90°
0°	2166	2166	2166
5°	2169	2156	2167
10°	2157	2148	2160
15°	2135	2134	2152
20°	2105	2112	2138
25°	2071	2088	2121
30°	2027	2062	2101
35°	1976	2026	2089
40°	1917	1996	2077
45°	1860	1965	2073
50°	1797	1938	2068
55°	1733	1914	2079
60°	1654	1896	2094
65°	1566	1888	2144
70°	1460	1899	2220
75°	1299	1953	2339
80°	1062	1995	2284
85°	750	1742	1778



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.1	3.3
10°-20°	413.2	9.4
20°-30°	619.5	14.1
30°-40°	737.8	16.8
40°-50°	760.7	17.3
50°-60°	694.2	15.8
60°-70°	555.1	12.6
70°-80°	362.6	8.2
80°-90°	108.9	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°	1177.8	26.8
0°-40°	1915.6	43.6
0°-60°	3370.5	76.7
0°-90°	4397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4397.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1531	1528	1522	1531	1530	145
15°	1461	1462	1460	1473	1473	412
25°	1330	1332	1341	1361	1362	612
35°	1147	1155	1176	1205	1213	716
45°	932	948	984	1026	1038	718
55°	704	724	778	829	845	627
65°	469	500	565	621	642	465
75°	238	278	358	416	429	253
85°	46	83	108	110	110	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1534.8	1534.8	1534.8	1534.8	1534.8
2.5°	1537.0	1534.8	1526.7	1536.2	1534.8
5°	1531.2	1528.2	1521.7	1531.2	1529.8
7.5°	1519.5	1518.1	1511.6	1522.4	1521.0
10°	1505.1	1503.7	1498.6	1509.4	1507.3
12.5°	1485.0	1484.2	1480.6	1493.6	1492.2
15°	1461.0	1461.7	1460.3	1472.7	1472.7
17.5°	1433.7	1432.9	1435.8	1450.9	1449.5
20°	1401.8	1402.5	1406.1	1423.6	1423.6
22.5°	1368.7	1367.9	1375.9	1393.2	1394.6
25°	1329.6	1331.8	1341.1	1360.7	1362.2
27.5°	1287.7	1291.4	1303.0	1325.3	1327.4
30°	1243.7	1248.0	1265.3	1286.2	1289.1
32.5°	1195.3	1204.7	1220.5	1247.3	1254.5
35°	1146.9	1154.8	1175.9	1205.4	1212.6
37.5°	1093.4	1106.4	1130.3	1162.7	1172.3
40°	1040.7	1053.8	1083.3	1117.4	1127.4
42.5°	987.2	1001.1	1034.9	1073.3	1084.1
45°	931.8	948.3	984.3	1025.6	1038.5
47.5°	874.7	894.1	933.2	977.9	992.4
50°	818.3	837.8	882.6	928.7	941.8
52.5°	757.7	782.2	829.9	879.7	892.7
55°	704.2	724.4	777.9	829.2	845.0
57.5°	641.4	668.8	725.8	777.9	793.0
60°	585.8	611.0	671.6	724.4	741.7
62.5°	529.4	555.4	616.0	676.0	692.0
65°	468.8	500.5	565.4	621.1	642.1
67.5°	411.0	444.1	510.7	569.8	591.5
70°	353.9	387.8	460.1	520.8	538.1
72.5°	297.6	333.0	408.1	467.3	487.5
75°	238.3	278.1	358.2	416.0	429.0
77.5°	182.7	226.8	307.7	346.7	356.1
80°	130.7	179.1	245.5	273.8	281.0
82.5°	85.9	132.9	183.4	198.6	196.4
85°	46.3	83.0	107.6	109.8	109.8
87.5°	18.0	33.3	34.0	25.9	24.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)