

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: P881207

Luminaire Tested: **24CZ2-45VHE-SQR-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: P881207  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P474669)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 10/2/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-SQR-UNV-B40  
Description: 2X4 4500 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 4000K CCT AND SQR LENS

Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

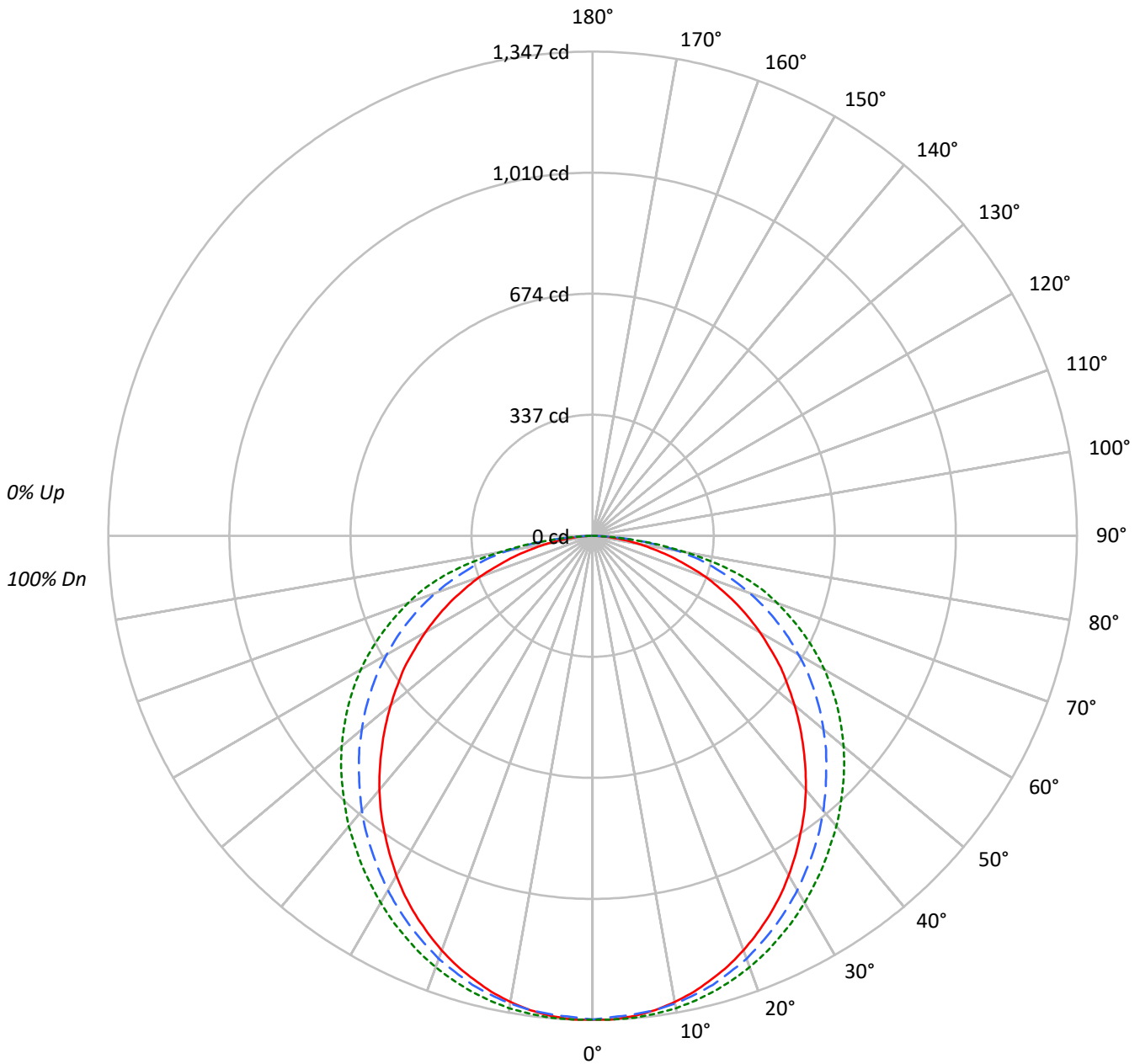
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4097.0 lumens  
Efficiency: N/A  
Efficacy: 120.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
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			100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82			82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68			68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56			56
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48			48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41			41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36			36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31			31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28			28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25			25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23			23

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

	0°	45°	90°
0°	1899	1899	1899
5°	1899	1894	1907
10°	1887	1894	1913
15°	1867	1890	1916
20°	1843	1881	1918
25°	1813	1867	1918
30°	1778	1856	1921
35°	1738	1845	1928
40°	1700	1839	1944
45°	1654	1834	1965
50°	1610	1840	2000
55°	1572	1852	2045
60°	1519	1866	2102
65°	1458	1889	2166
70°	1383	1915	2253
75°	1239	1941	2327
80°	1043	1947	2112
85°	774	1472	1388



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.5	3.1
10°-20°	365.5	8.9
20°-30°	553.3	13.5
30°-40°	669.3	16.3
40°-50°	706.5	17.2
50°-60°	666.2	16.3
60°-70°	549.3	13.4
70°-80°	360.3	8.8
80°-90°	99.1	2.4
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°	1046.3	25.5
0°-40°	1715.6	41.9
0°-60°	3088.3	75.4
0°-90°	4097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4097.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1346	1346	1346	1346	1346	
5°	1340	1340	1337	1346	1346	127
15°	1278	1285	1293	1308	1311	360
25°	1164	1179	1199	1224	1232	536
35°	1009	1035	1071	1108	1119	631
45°	829	866	919	968	984	639
55°	639	684	753	809	831	569
65°	437	489	566	626	649	431
75°	227	285	356	412	427	240
85°	48	82	91	88	86	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1345.8	1345.8	1345.8	1345.8	1345.8
2.5°	1347.0	1345.8	1339.9	1347.7	1347.0
5°	1340.4	1340.4	1336.6	1345.8	1345.8
7.5°	1331.3	1332.0	1330.6	1341.1	1341.1
10°	1317.0	1319.6	1321.5	1333.3	1334.6
12.5°	1299.9	1304.5	1308.4	1322.8	1324.2
15°	1277.6	1284.9	1293.3	1308.4	1311.1
17.5°	1254.7	1263.3	1272.5	1292.1	1295.4
20°	1227.3	1237.1	1252.1	1271.8	1277.0
22.5°	1196.6	1210.2	1225.9	1249.5	1256.1
25°	1164.5	1178.8	1199.1	1224.0	1231.8
27.5°	1129.8	1146.7	1169.7	1198.5	1206.9
30°	1091.2	1110.7	1138.9	1169.7	1178.8
32.5°	1050.5	1073.4	1104.8	1138.9	1149.3
35°	1008.7	1034.8	1070.8	1107.5	1119.3
37.5°	967.3	993.6	1036.2	1074.8	1085.8
40°	922.8	951.6	998.2	1039.4	1055.1
42.5°	875.7	909.9	958.9	1004.8	1019.8
45°	828.6	865.9	919.0	968.0	984.4
47.5°	780.9	822.1	880.4	930.1	949.1
50°	733.1	776.9	837.8	891.4	911.1
52.5°	684.6	730.5	796.6	853.5	871.2
55°	638.9	683.9	752.7	809.0	831.2
57.5°	585.8	636.8	709.5	766.5	788.1
60°	538.0	587.8	661.1	721.3	744.8
62.5°	486.3	537.3	614.6	674.8	697.7
65°	436.6	489.0	565.6	625.8	648.6
67.5°	382.9	437.9	516.4	574.7	597.0
70°	335.1	386.9	464.0	523.7	545.9
72.5°	276.9	335.8	409.7	468.7	492.8
75°	227.2	285.3	356.0	412.4	426.7
77.5°	174.7	233.0	303.1	339.6	349.5
80°	128.3	183.2	239.6	259.2	259.8
82.5°	86.4	134.9	167.0	176.8	175.4
85°	47.8	82.5	90.9	88.3	85.7
87.5°	19.7	27.4	22.3	15.7	12.4
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)