

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: P881198

Luminaire Tested: **24CZ2-45VHE-HRP-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: P881198
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P474369)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 10/2/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-HRP-UNV-B40
Description: 2X4 4500 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 4000K CCT AND HRP LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

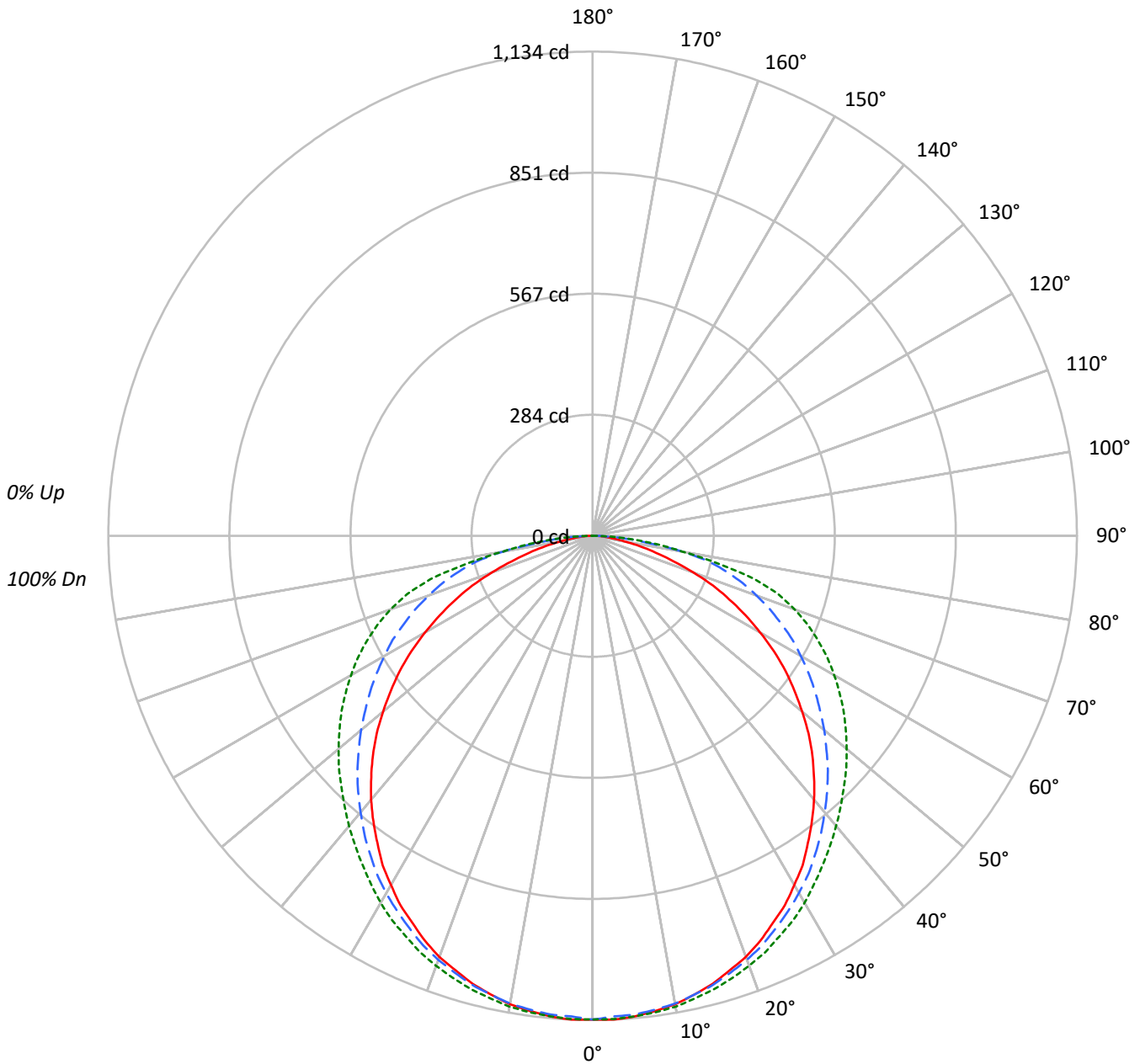
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3492.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
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									
RC	80									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	98	94	105	101	96	93	96	93	90	92	90	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	59	68	63	58	56																			
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36																			
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31																			
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28																			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25																			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1599	1599	1599
5°	1601	1595	1601
10°	1596	1594	1605
15°	1587	1591	1606
20°	1577	1587	1609
25°	1557	1580	1612
30°	1539	1575	1618
35°	1514	1566	1620
40°	1487	1557	1635
45°	1453	1555	1660
50°	1406	1554	1705
55°	1356	1565	1766
60°	1279	1589	1844
65°	1181	1626	1948
70°	1032	1683	2075
75°	837	1769	2144
80°	619	1735	1735
85°	474	1279	1444



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	3.1
10°-20°	308.2	8.8
20°-30°	469.2	13.4
30°-40°	569.7	16.3
40°-50°	601.9	17.2
50°-60°	568.0	16.3
60°-70°	472.3	13.5
70°-80°	310.7	8.9
80°-90°	84.7	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°	884.7	25.3
0°-40°	1454.5	41.7
0°-60°	2624.3	75.2
0°-90°	3492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1130	1130	1126	1130	1130	107
15°	1086	1088	1089	1099	1099	306
25°	1000	1006	1014	1032	1035	461
35°	879	889	909	933	940	550
45°	728	743	779	817	832	561
55°	551	574	636	696	718	491
65°	354	395	487	558	583	350
75°	154	224	324	384	393	165
85°	29	64	79	88	89	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1133.0	1133.0	1133.0	1133.0	1133.0
2.5°	1134.4	1133.0	1127.1	1133.0	1133.0
5°	1130.1	1130.1	1125.6	1130.1	1130.1
7.5°	1122.7	1122.7	1119.7	1125.6	1125.6
10°	1114.0	1114.0	1112.5	1119.7	1119.7
12.5°	1100.8	1102.1	1100.8	1109.5	1109.5
15°	1086.1	1087.6	1089.2	1099.4	1099.4
17.5°	1067.3	1070.2	1073.0	1084.7	1086.1
20°	1049.7	1051.0	1056.9	1070.2	1071.6
22.5°	1026.4	1030.7	1038.0	1051.0	1055.6
25°	999.8	1005.7	1014.5	1032.1	1035.0
27.5°	975.1	979.5	991.2	1010.2	1016.1
30°	944.4	951.7	966.3	985.3	992.6
32.5°	915.1	922.5	940.0	960.4	966.3
35°	878.7	888.9	909.2	932.7	940.0
37.5°	843.5	853.7	878.7	904.9	913.8
40°	806.9	818.6	845.1	875.6	887.3
42.5°	767.4	783.6	812.8	846.4	859.6
45°	727.9	742.6	779.1	817.1	831.8
47.5°	685.7	703.3	742.6	788.0	805.6
50°	640.3	662.2	707.6	757.2	776.4
52.5°	595.1	619.9	671.0	726.5	747.1
55°	551.1	574.5	635.9	696.0	717.9
57.5°	502.9	532.3	599.4	663.7	685.7
60°	453.2	485.4	562.8	630.0	653.4
62.5°	403.5	440.1	527.7	595.1	619.9
65°	353.7	394.8	486.9	558.5	583.4
67.5°	305.5	350.9	448.8	520.5	545.2
70°	250.0	307.1	407.8	478.1	502.9
72.5°	198.8	264.7	368.3	434.3	456.2
75°	153.5	223.8	324.5	384.4	393.2
77.5°	112.5	182.7	279.2	299.6	301.1
80°	76.1	146.1	213.5	210.5	213.5
82.5°	49.7	109.7	134.4	150.6	152.0
85°	29.3	64.4	79.0	87.8	89.2
87.5°	14.6	21.9	27.8	29.3	32.1
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)