

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: P388736

Luminaire Tested: **24CZ2-45VHE-SQR-UNV-L940-CD1-U**

Issue Date: 2/28/2020

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: P388736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3740.1 lumens
Efficiency: N/A
Efficacy: 126.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

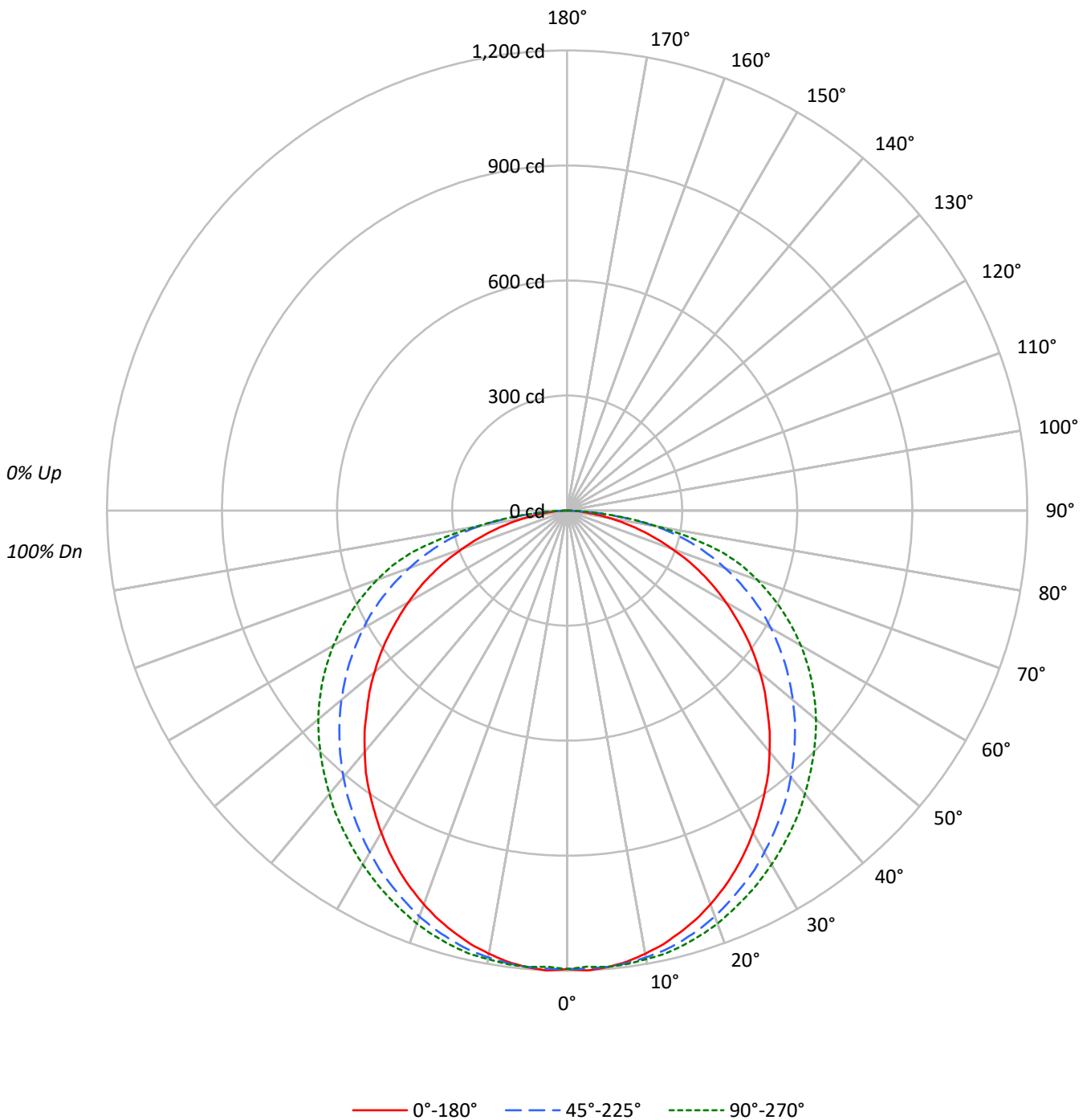
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388736

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388736

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L940-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82	82	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67	67	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56	56	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47	47	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41	41	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35	35	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31	31	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28	28	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25	25	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22	22	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1609	1609	1609
5°	1615	1613	1613
10°	1603	1617	1623
15°	1586	1617	1634
20°	1565	1613	1641
25°	1538	1604	1647
30°	1506	1598	1656
35°	1475	1594	1672
40°	1443	1594	1694
45°	1405	1598	1727
50°	1373	1608	1773
55°	1333	1625	1828
60°	1286	1652	1894
65°	1231	1683	1974
70°	1142	1725	2075
75°	1033	1785	2170
80°	871	1790	1866
85°	667	1354	1354



TEST NUMBER: P388736

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	3.0
10°-20°	326.5	8.7
20°-30°	495.9	13.3
30°-40°	603.2	16.1
40°-50°	642.2	17.2
50°-60°	611.7	16.4
60°-70°	511.6	13.7
70°-80°	341.1	9.1
80°-90°	94.4	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°	935.9	25.0
0°-40°	1539.2	41.2
0°-60°	2793.1	74.7
0°-90°	3740.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3740.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1188	1194	1194	1194	113
15°	1139	1141	1161	1170	1173	321
25°	1036	1050	1081	1099	1109	477
35°	898	924	971	1003	1018	562
45°	739	778	840	887	908	571
55°	568	618	693	753	779	508
65°	387	443	529	594	620	382
75°	199	262	343	401	417	211
85°	43	80	88	86	88	52
90°	0	0	0	0	0	



TEST NUMBER: P388736

CATALOG NUMBER: 24CZ2-45VHE-SQR-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1200.5	1191.8	1195.5	1195.5	1190.6
5°	1195.5	1188.1	1194.3	1194.3	1194.3
7.5°	1186.9	1180.7	1190.6	1193.0	1193.0
10°	1173.3	1170.8	1183.2	1186.9	1188.1
12.5°	1158.5	1157.2	1174.5	1179.5	1183.2
15°	1138.7	1141.2	1160.9	1169.6	1173.3
17.5°	1117.7	1122.7	1144.9	1157.2	1160.9
20°	1093.0	1100.4	1126.4	1138.7	1146.1
22.5°	1065.8	1077.0	1104.1	1118.9	1127.6
25°	1036.2	1049.8	1080.7	1099.2	1109.1
27.5°	1004.1	1021.4	1057.2	1078.2	1088.1
30°	969.5	989.3	1028.8	1053.5	1065.8
32.5°	933.7	957.2	1000.4	1027.6	1042.4
35°	897.9	923.8	970.7	1002.9	1017.7
37.5°	862.1	888.0	939.9	974.4	993.0
40°	821.3	852.2	907.8	946.0	964.6
42.5°	781.8	815.1	874.4	916.4	936.2
45°	738.6	778.1	839.8	886.8	907.8
47.5°	699.0	738.6	805.2	854.6	878.1
50°	655.8	697.8	768.2	822.5	847.2
52.5°	613.8	657.0	731.1	789.2	813.9
55°	568.1	617.5	692.9	753.4	779.3
57.5°	522.4	575.5	653.3	716.3	742.3
60°	478.0	532.3	613.8	676.8	704.0
62.5°	433.5	487.8	573.1	637.3	663.2
65°	386.6	443.4	528.6	594.1	620.0
67.5°	339.6	398.9	484.1	549.6	574.3
70°	290.2	353.2	438.4	502.7	527.4
72.5°	244.5	307.5	391.5	454.5	478.0
75°	198.8	261.8	343.3	401.4	417.4
77.5°	154.4	217.4	290.2	328.5	332.2
80°	112.4	171.7	231.0	242.1	240.8
82.5°	75.3	128.4	159.3	160.6	164.3
85°	43.2	80.3	87.7	86.5	87.7
87.5°	17.3	28.4	24.7	18.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)