

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: P388822

Luminaire Tested: **24CZ2-45VHE-UNV-L930-CD1-SWPD1-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: P388822
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3714.8 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

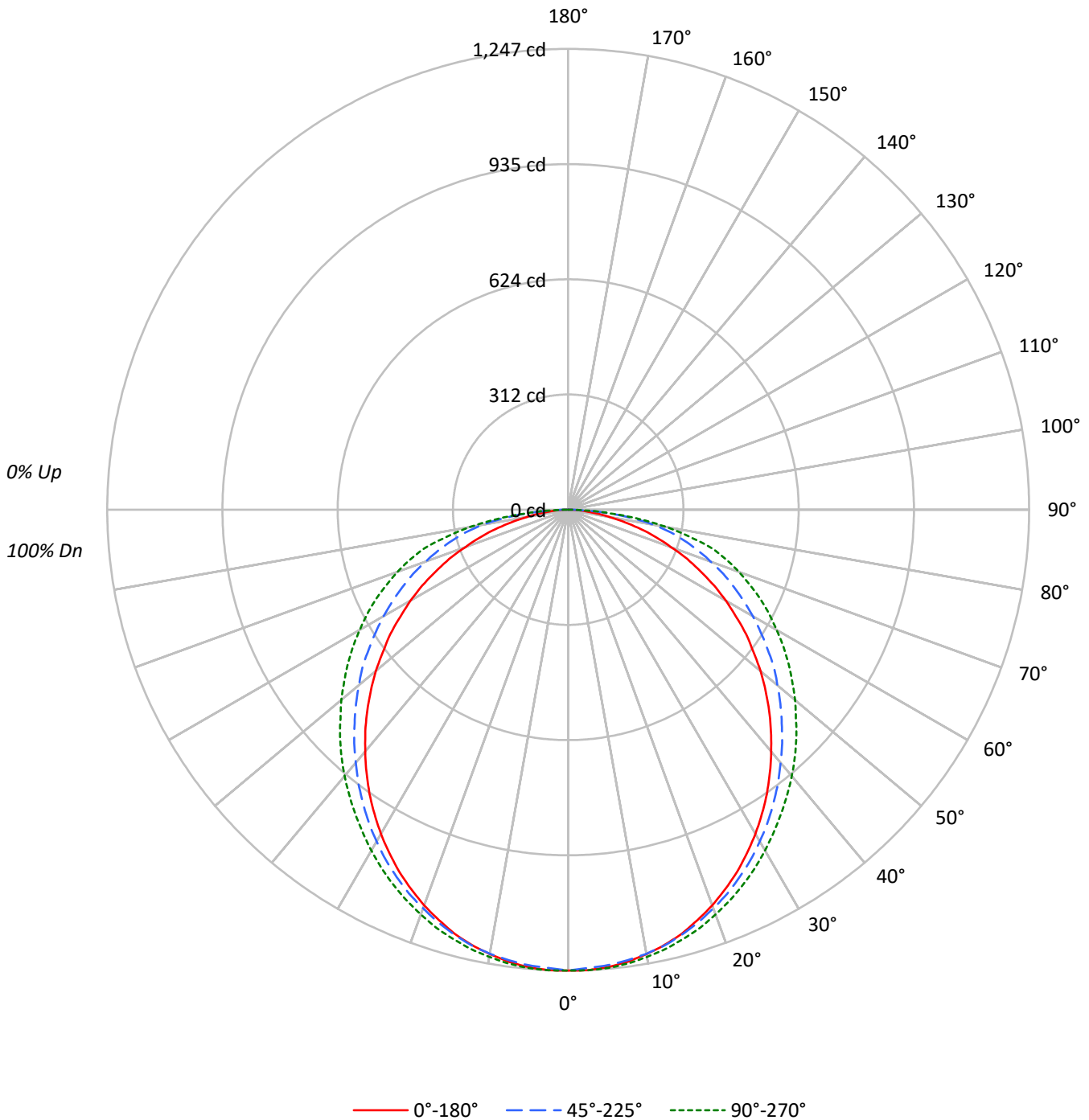
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388822

CATALOG NUMBER: 24CZ2-45VHE-UNV-L930-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388822

CATALOG NUMBER: 24CZ2-45VHE-UNV-L930-CD1-SWPD1-U

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	98	94	105	100	96	92	96	93	89	92	89	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	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1678	1678	1678
5°	1678	1671	1681
10°	1668	1667	1679
15°	1654	1658	1675
20°	1631	1644	1669
25°	1605	1629	1662
30°	1574	1610	1655
35°	1540	1590	1649
40°	1500	1570	1653
45°	1463	1555	1661
50°	1422	1547	1676
55°	1379	1544	1707
60°	1324	1551	1752
65°	1255	1575	1827
70°	1166	1614	1932
75°	1064	1695	2095
80°	874	1826	2094
85°	670	1684	1798



TEST NUMBER: P388822

CATALOG NUMBER: 24CZ2-45VHE-UNV-L930-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	3.2
10°-20°	336.8	9.1
20°-30°	506.8	13.6
30°-40°	607.3	16.3
40°-50°	632.9	17.0
50°-60°	588.8	15.9
60°-70°	485.0	13.1
70°-80°	330.3	8.9
80°-90°	109.0	2.9
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°	961.5	25.9
0°-40°	1568.8	42.2
0°-60°	2790.5	75.1
0°-90°	3714.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3714.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1242	1242	1237	1244	1245	118
15°	1188	1189	1190	1201	1203	335
25°	1081	1086	1097	1116	1120	498
35°	937	948	968	994	1004	586
45°	769	785	817	858	873	593
55°	588	608	658	710	728	524
65°	394	428	495	553	574	391
75°	205	250	326	384	403	216
85°	43	84	109	116	116	54
90°	0	0	0	0	0	



TEST NUMBER: P388822

CATALOG NUMBER: 24CZ2-45VHE-UNV-L930-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1247.2	1247.2	1247.2	1247.2	1247.2
2.5°	1247.2	1247.2	1241.0	1247.2	1247.2
5°	1242.3	1242.3	1237.3	1243.5	1244.8
7.5°	1233.6	1234.8	1229.9	1237.3	1238.6
10°	1221.2	1222.4	1220.0	1227.4	1228.6
12.5°	1206.3	1207.6	1207.6	1216.2	1217.5
15°	1187.7	1189.0	1190.2	1201.4	1202.6
17.5°	1164.2	1167.9	1170.4	1184.0	1186.5
20°	1139.4	1143.1	1148.0	1162.9	1165.4
22.5°	1110.9	1115.8	1124.5	1140.6	1144.3
25°	1081.1	1086.1	1097.2	1115.8	1119.5
27.5°	1047.6	1055.1	1068.7	1088.5	1093.5
30°	1012.9	1020.3	1036.5	1057.5	1065.0
32.5°	975.7	985.6	1004.2	1027.8	1035.2
35°	937.3	948.4	968.3	994.3	1004.2
37.5°	896.4	908.8	932.3	960.8	973.2
40°	854.2	869.1	893.9	927.4	941.0
42.5°	812.1	825.7	856.7	892.7	907.5
45°	768.7	784.8	817.0	857.9	872.8
47.5°	724.0	740.2	778.6	822.0	835.6
50°	679.4	695.5	738.9	784.8	800.9
52.5°	631.1	652.1	701.7	747.6	763.7
55°	587.7	607.5	658.3	710.4	727.8
57.5°	538.1	561.6	617.4	672.0	690.6
60°	492.2	517.0	576.5	632.3	650.9
62.5°	445.1	472.4	535.6	592.6	613.7
65°	394.3	427.7	494.7	552.9	574.0
67.5°	348.4	383.1	453.8	513.3	531.9
70°	296.3	338.5	410.4	469.9	491.0
72.5°	251.7	293.8	369.5	427.7	448.8
75°	204.6	250.4	326.1	384.3	402.9
77.5°	157.5	208.3	283.9	328.5	334.7
80°	112.8	166.1	235.6	261.6	270.3
82.5°	79.3	127.7	173.6	190.9	195.9
85°	43.4	84.3	109.1	116.5	116.5
87.5°	18.6	36.0	43.4	44.6	45.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)