

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: P388828

Luminaire Tested: **24CZ2-45VHE-UNV-L940-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: P388828
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-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3846.1 lumens
Efficiency: N/A
Efficacy: 129.9 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

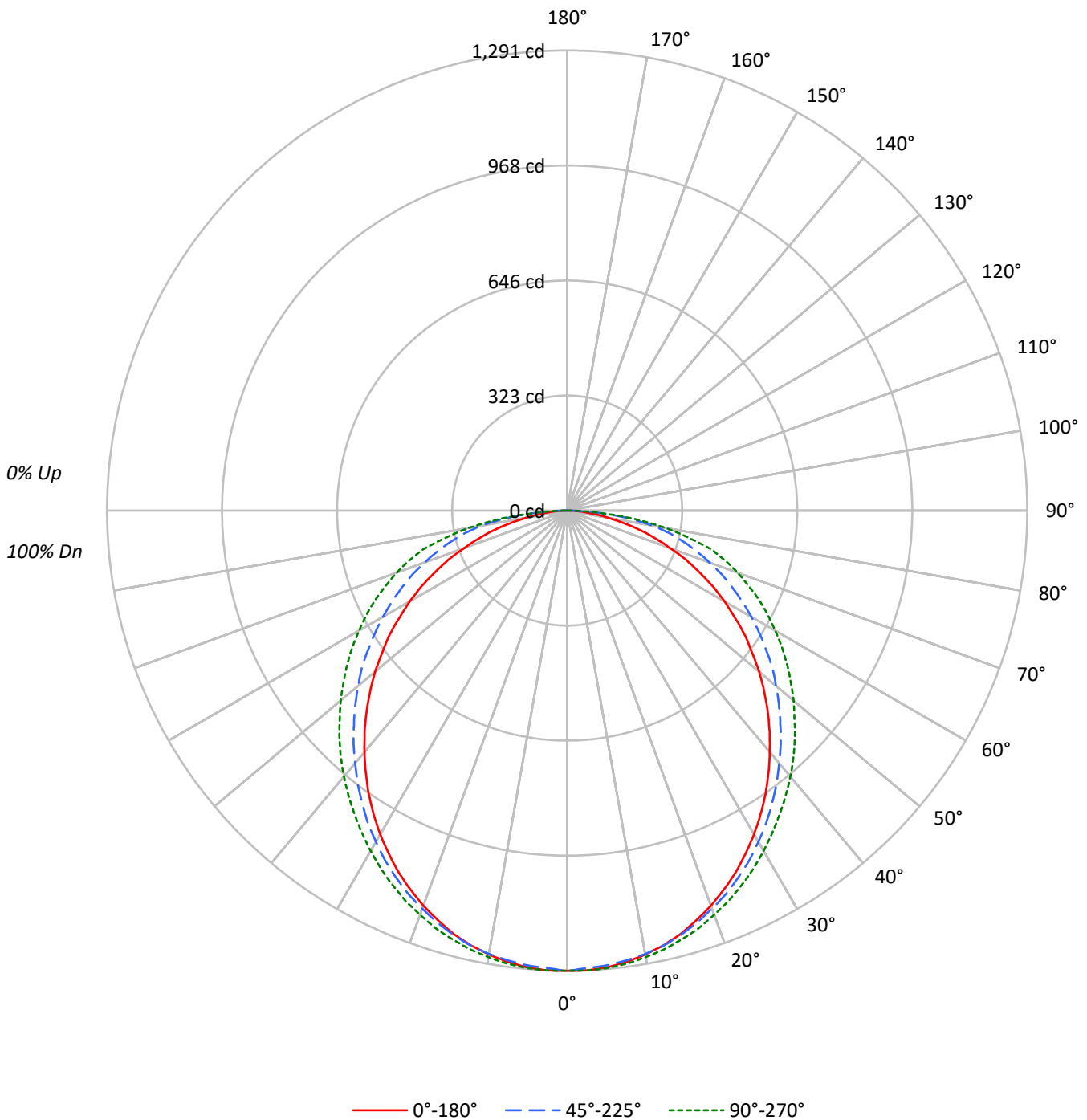
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	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
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1737	1737	1737
5°	1737	1730	1741
10°	1727	1726	1738
15°	1713	1717	1734
20°	1689	1702	1728
25°	1662	1686	1721
30°	1629	1667	1713
35°	1594	1647	1708
40°	1553	1626	1711
45°	1514	1610	1720
50°	1472	1601	1736
55°	1427	1599	1768
60°	1371	1606	1813
65°	1300	1631	1892
70°	1207	1672	2000
75°	1101	1755	2169
80°	905	1890	2168
85°	693	1744	1863



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	3.2
10°-20°	348.7	9.1
20°-30°	524.7	13.6
30°-40°	628.8	16.3
40°-50°	655.2	17.0
50°-60°	609.6	15.9
60°-70°	502.1	13.1
70°-80°	342.0	8.9
80°-90°	112.9	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°	995.5	25.9
0°-40°	1624.3	42.2
0°-60°	2889.1	75.1
0°-90°	3846.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3846.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1286	1286	1281	1288	1289	122
15°	1230	1231	1232	1244	1245	346
25°	1119	1124	1136	1155	1159	515
35°	970	982	1002	1030	1040	607
45°	796	812	846	888	904	614
55°	608	629	682	736	754	542
65°	408	443	512	572	594	405
75°	212	259	338	398	417	223
85°	45	87	113	121	121	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1291.3	1291.3	1284.9	1291.3	1291.3
5°	1286.2	1286.2	1281.0	1287.5	1288.7
7.5°	1277.2	1278.5	1273.3	1281.0	1282.3
10°	1264.4	1265.6	1263.1	1270.8	1272.1
12.5°	1249.0	1250.2	1250.2	1259.2	1260.5
15°	1229.7	1231.0	1232.3	1243.8	1245.1
17.5°	1205.3	1209.2	1211.7	1225.9	1228.4
20°	1179.6	1183.5	1188.6	1204.0	1206.6
22.5°	1150.1	1155.3	1164.2	1180.9	1184.8
25°	1119.3	1124.4	1136.0	1155.3	1159.1
27.5°	1084.7	1092.4	1106.5	1127.0	1132.1
30°	1048.7	1056.4	1073.1	1094.9	1102.6
32.5°	1010.2	1020.5	1039.7	1064.1	1071.8
35°	970.4	982.0	1002.5	1029.5	1039.7
37.5°	928.1	940.9	965.3	994.8	1007.6
40°	884.4	899.8	925.5	960.1	974.3
42.5°	840.8	854.9	887.0	924.2	939.6
45°	795.8	812.5	845.9	888.3	903.7
47.5°	749.6	766.3	806.1	851.0	865.2
50°	703.4	720.1	765.0	812.5	829.2
52.5°	653.4	675.2	726.5	774.0	790.7
55°	608.4	629.0	681.6	735.5	753.5
57.5°	557.1	581.5	639.2	695.7	715.0
60°	509.6	535.3	596.9	654.6	673.9
62.5°	460.8	489.1	554.5	613.6	635.4
65°	408.2	442.8	512.2	572.5	594.3
67.5°	360.7	396.6	469.8	531.4	550.7
70°	306.8	350.4	424.9	486.5	508.3
72.5°	260.6	304.2	382.5	442.8	464.7
75°	211.8	259.3	337.6	397.9	417.2
77.5°	163.0	215.6	293.9	340.2	346.6
80°	116.8	172.0	243.9	270.8	279.8
82.5°	82.2	132.2	179.7	197.7	202.8
85°	44.9	87.3	113.0	120.7	120.7
87.5°	19.3	37.2	44.9	46.2	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)