

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: P388827

Luminaire Tested: **24CZ2-45VHE-UNV-L940-CD1-SDWPD1-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: P388827
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-SDWPD1-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: 3799.7 lumens
Efficiency: N/A
Efficacy: 128.4 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

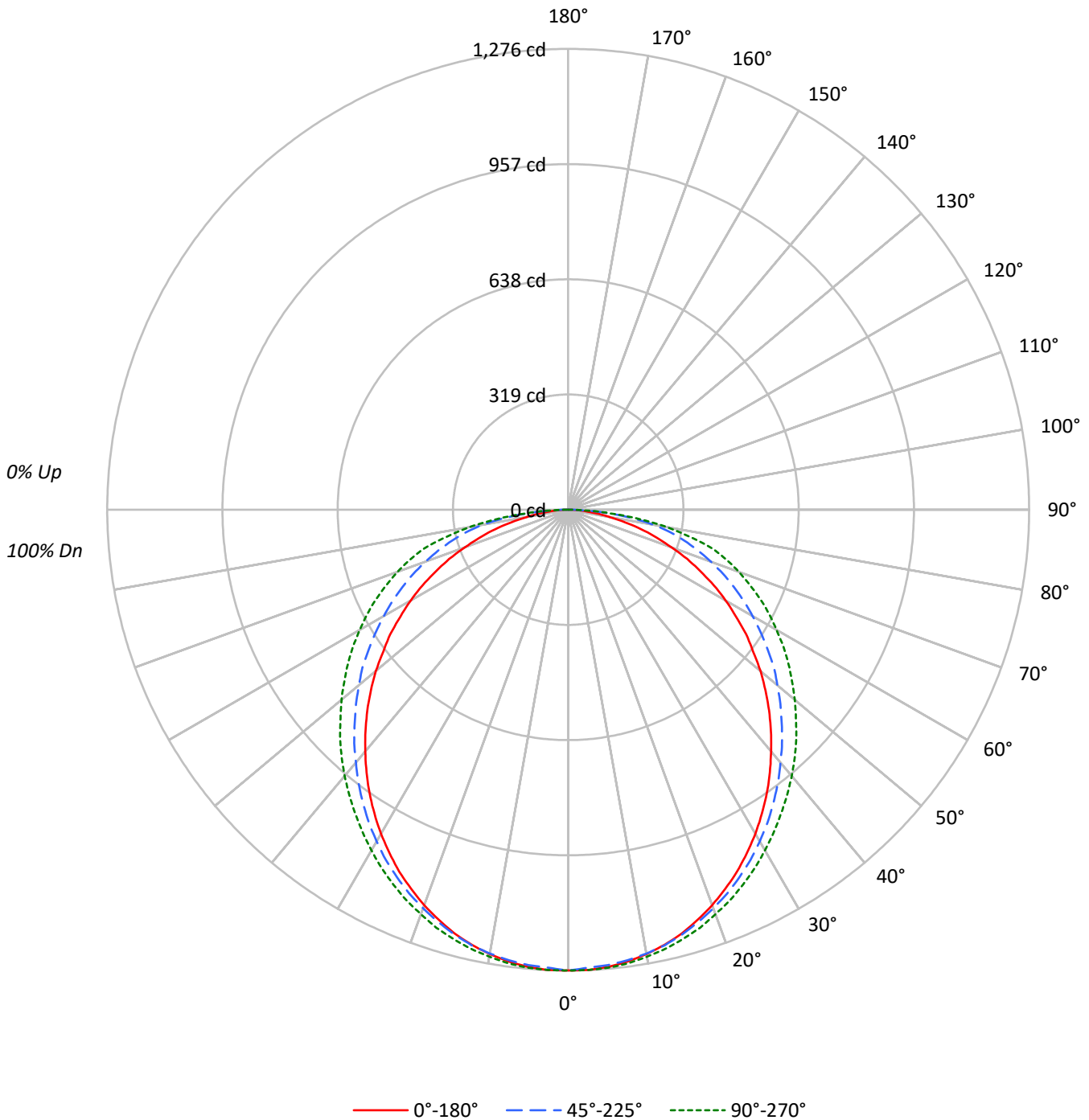
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1716	1716	1716
5°	1716	1709	1720
10°	1707	1705	1717
15°	1692	1696	1713
20°	1669	1681	1707
25°	1642	1666	1700
30°	1610	1647	1692
35°	1575	1627	1687
40°	1535	1606	1691
45°	1496	1590	1699
50°	1455	1582	1715
55°	1410	1580	1746
60°	1355	1587	1792
65°	1284	1611	1869
70°	1192	1651	1976
75°	1088	1734	2142
80°	894	1867	2142
85°	685	1723	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	3.2
10°-20°	344.5	9.1
20°-30°	518.4	13.6
30°-40°	621.2	16.3
40°-50°	647.3	17.0
50°-60°	602.3	15.9
60°-70°	496.1	13.1
70°-80°	337.8	8.9
80°-90°	111.5	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°	983.5	25.9
0°-40°	1604.7	42.2
0°-60°	2854.3	75.1
0°-90°	3799.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3799.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1276	1276	1276	1276	1276	
5°	1271	1271	1266	1272	1273	121
15°	1215	1216	1217	1229	1230	342
25°	1106	1111	1122	1141	1145	509
35°	959	970	990	1017	1027	599
45°	786	803	836	878	893	606
55°	601	621	673	727	744	536
65°	403	438	506	566	587	400
75°	209	256	334	393	412	221
85°	44	86	112	119	119	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1275.7	1275.7	1275.7	1275.7	1275.7
2.5°	1275.7	1275.7	1269.4	1275.7	1275.7
5°	1270.7	1270.7	1265.6	1271.9	1273.2
7.5°	1261.8	1263.1	1258.0	1265.6	1266.9
10°	1249.1	1250.4	1247.8	1255.4	1256.7
12.5°	1233.9	1235.2	1235.2	1244.0	1245.3
15°	1214.9	1216.1	1217.4	1228.8	1230.1
17.5°	1190.8	1194.6	1197.1	1211.1	1213.6
20°	1165.4	1169.2	1174.3	1189.5	1192.0
22.5°	1136.2	1141.3	1150.2	1166.7	1170.5
25°	1105.8	1110.9	1122.3	1141.3	1145.1
27.5°	1071.6	1079.2	1093.1	1113.4	1118.5
30°	1036.1	1043.7	1060.2	1081.7	1089.3
32.5°	998.0	1008.2	1027.2	1051.3	1058.9
35°	958.7	970.1	990.4	1017.0	1027.2
37.5°	916.9	929.5	953.6	982.8	995.5
40°	873.7	889.0	914.3	948.6	962.5
42.5°	830.6	844.6	876.3	913.1	928.3
45°	786.2	802.7	835.7	877.5	892.8
47.5°	740.6	757.1	796.4	840.8	854.7
50°	694.9	711.4	755.8	802.7	819.2
52.5°	645.5	667.0	717.8	764.7	781.2
55°	601.1	621.4	673.4	726.6	744.4
57.5°	550.4	574.5	631.5	687.3	706.3
60°	503.4	528.8	589.7	646.7	665.8
62.5°	455.3	483.2	547.8	606.2	627.7
65°	403.3	437.5	506.0	565.6	587.1
67.5°	356.3	391.9	464.1	525.0	544.0
70°	303.1	346.2	419.8	480.6	502.2
72.5°	257.4	300.5	377.9	437.5	459.1
75°	209.2	256.2	333.5	393.1	412.1
77.5°	161.1	213.0	290.4	336.1	342.4
80°	115.4	169.9	240.9	267.6	276.5
82.5°	81.2	130.6	177.5	195.3	200.4
85°	44.4	86.2	111.6	119.2	119.2
87.5°	19.0	36.8	44.4	45.7	46.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)