

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: P388780

Luminaire Tested: **24CZ2-50HE-SQR-UNV-L935-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: P388780
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: 24CZ2-50HE-SQR-UNV-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4026.4 lumens
Efficiency: N/A
Efficacy: 104.3 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

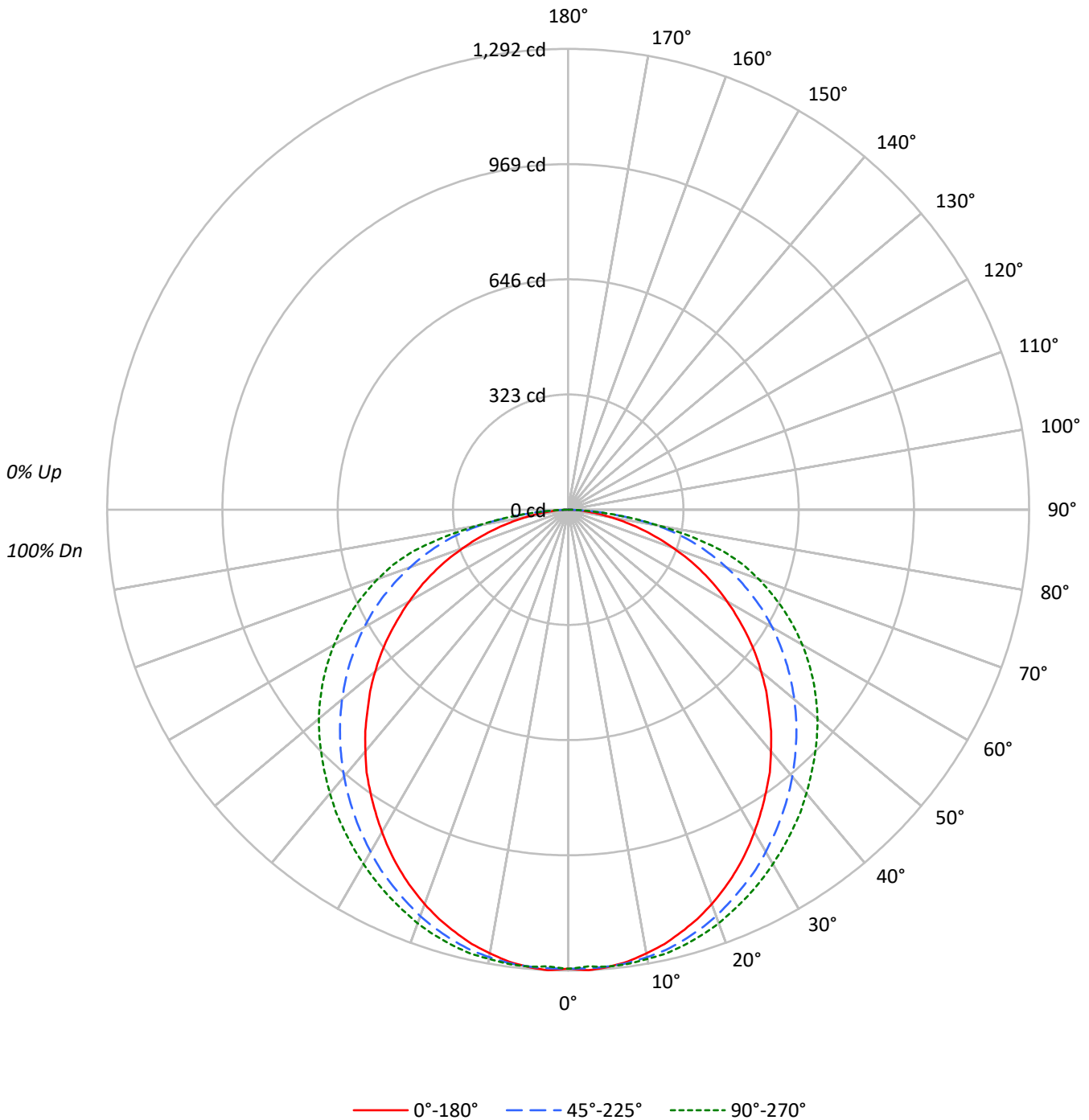
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1732	1732	1732
5°	1738	1737	1737
10°	1726	1740	1748
15°	1708	1741	1759
20°	1685	1736	1767
25°	1656	1727	1773
30°	1622	1721	1783
35°	1588	1716	1800
40°	1553	1716	1824
45°	1513	1720	1859
50°	1478	1731	1909
55°	1435	1750	1968
60°	1385	1778	2039
65°	1325	1812	2125
70°	1229	1857	2233
75°	1113	1921	2336
80°	938	1926	2009
85°	718	1457	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.0
10°-20°	351.5	8.7
20°-30°	533.9	13.3
30°-40°	649.4	16.1
40°-50°	691.4	17.2
50°-60°	658.5	16.4
60°-70°	550.7	13.7
70°-80°	367.2	9.1
80°-90°	101.6	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°	1007.6	25.0
0°-40°	1657.0	41.2
0°-60°	3006.9	74.7
0°-90°	4026.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4026.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1287	1279	1286	1286	1286	122
15°	1226	1228	1250	1259	1263	346
25°	1116	1130	1163	1183	1194	514
35°	967	994	1045	1080	1096	605
45°	795	838	904	955	977	615
55°	612	665	746	811	839	547
65°	416	477	569	640	667	411
75°	214	282	370	432	449	227
85°	46	86	94	93	94	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1287.0	1287.0	1287.0	1287.0	1287.0
2.5°	1292.4	1283.0	1287.0	1287.0	1281.7
5°	1287.0	1279.1	1285.7	1285.7	1285.7
7.5°	1277.7	1271.1	1281.7	1284.4	1284.4
10°	1263.1	1260.4	1273.7	1277.7	1279.1
12.5°	1247.1	1245.8	1264.4	1269.7	1273.7
15°	1225.9	1228.5	1249.8	1259.1	1263.1
17.5°	1203.3	1208.6	1232.5	1245.8	1249.8
20°	1176.7	1184.7	1212.6	1225.9	1233.9
22.5°	1147.4	1159.4	1188.6	1204.6	1213.9
25°	1115.5	1130.1	1163.4	1183.3	1194.0
27.5°	1080.9	1099.6	1138.1	1160.7	1171.4
30°	1043.7	1065.0	1107.5	1134.1	1147.4
32.5°	1005.2	1030.4	1077.0	1106.2	1122.2
35°	966.6	994.5	1045.0	1079.6	1095.6
37.5°	928.0	956.0	1011.8	1049.0	1069.0
40°	884.2	917.4	977.2	1018.5	1038.4
42.5°	841.6	877.5	941.3	986.5	1007.8
45°	795.1	837.6	904.1	954.6	977.2
47.5°	752.5	795.1	866.9	920.1	945.3
50°	706.0	751.2	827.0	885.5	912.1
52.5°	660.8	707.3	787.1	849.6	876.2
55°	611.6	664.8	745.9	811.0	839.0
57.5°	562.4	619.6	703.3	771.2	799.1
60°	514.5	573.0	660.8	728.6	757.9
62.5°	466.7	525.2	616.9	686.1	714.0
65°	416.2	477.3	569.1	639.5	667.4
67.5°	365.6	429.5	521.2	591.7	618.3
70°	312.5	380.3	472.0	541.1	567.7
72.5°	263.3	331.1	421.5	489.3	514.5
75°	214.1	281.9	369.6	432.1	449.4
77.5°	166.2	234.0	312.5	353.7	357.7
80°	121.0	184.8	248.6	260.6	259.3
82.5°	81.1	138.3	171.5	172.8	176.8
85°	46.5	86.4	94.4	93.1	94.4
87.5°	18.6	30.6	26.6	19.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)