

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: P388994

Luminaire Tested: **24CZ2-65HE-SQR-UNV-L930-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: P388994
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: 24CZ2-65HE-SQR-UNV-L930-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5221.8 lumens
Efficiency: N/A
Efficacy: 106.8 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

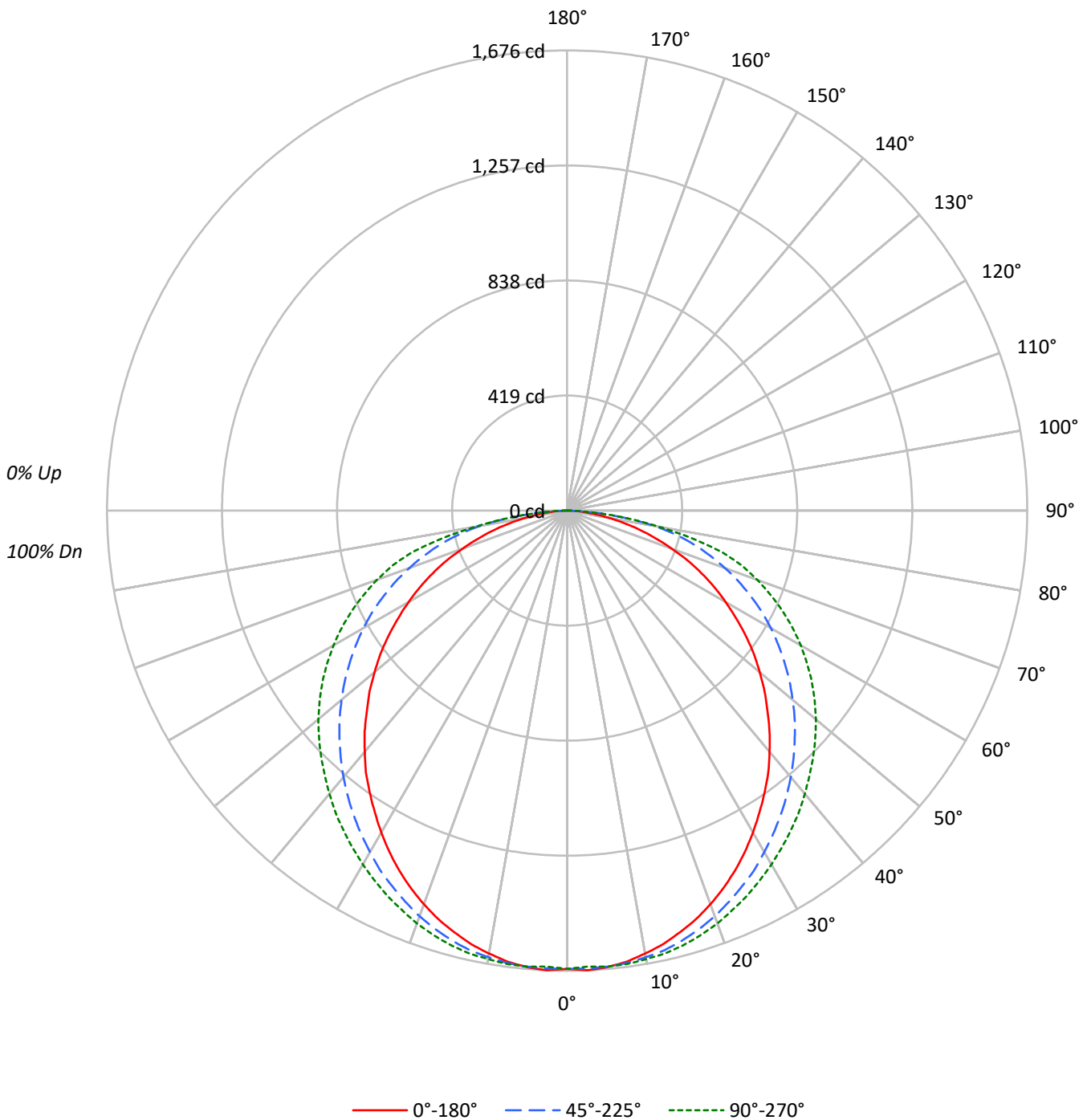
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2246	2246	2246
5°	2254	2252	2252
10°	2238	2257	2266
15°	2215	2258	2282
20°	2185	2252	2291
25°	2148	2240	2299
30°	2103	2232	2312
35°	2059	2226	2334
40°	2014	2226	2365
45°	1962	2231	2412
50°	1917	2245	2476
55°	1861	2269	2552
60°	1796	2306	2645
65°	1718	2350	2756
70°	1594	2408	2897
75°	1443	2492	3030
80°	1216	2498	2605
85°	932	1890	1890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.4	3.0
10°-20°	455.8	8.7
20°-30°	692.4	13.3
30°-40°	842.2	16.1
40°-50°	896.7	17.2
50°-60°	854.0	16.4
60°-70°	714.2	13.7
70°-80°	476.2	9.1
80°-90°	131.8	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°	1306.7	25.0
0°-40°	2148.9	41.2
0°-60°	3899.6	74.7
0°-90°	5221.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5221.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1669	1659	1667	1667	1667	158
15°	1590	1593	1621	1633	1638	448
25°	1447	1466	1509	1535	1548	666
35°	1254	1290	1355	1400	1421	784
45°	1031	1086	1172	1238	1267	797
55°	793	862	967	1052	1088	709
65°	540	619	738	829	866	533
75°	278	366	479	560	583	294
85°	60	112	122	121	122	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1669.1	1669.1	1669.1	1669.1	1669.1
2.5°	1676.0	1664.0	1669.1	1669.1	1662.2
5°	1669.1	1658.8	1667.4	1667.4	1667.4
7.5°	1657.1	1648.4	1662.2	1665.7	1665.7
10°	1638.1	1634.7	1651.9	1657.1	1658.8
12.5°	1617.4	1615.7	1639.8	1646.7	1651.9
15°	1589.8	1593.3	1620.9	1632.9	1638.1
17.5°	1560.5	1567.4	1598.4	1615.7	1620.9
20°	1526.0	1536.4	1572.6	1589.8	1600.2
22.5°	1488.1	1503.6	1541.5	1562.2	1574.3
25°	1446.7	1465.7	1508.8	1534.6	1548.4
27.5°	1401.9	1426.0	1476.0	1505.3	1519.1
30°	1353.6	1381.2	1436.4	1470.8	1488.1
32.5°	1303.6	1336.3	1396.7	1434.6	1455.3
35°	1253.6	1289.8	1355.3	1400.1	1420.8
37.5°	1203.6	1239.8	1312.2	1360.5	1386.4
40°	1146.7	1189.8	1267.4	1320.8	1346.7
42.5°	1091.5	1138.1	1220.8	1279.4	1307.0
45°	1031.1	1086.3	1172.5	1238.1	1267.4
47.5°	976.0	1031.1	1124.3	1193.2	1226.0
50°	915.6	974.2	1072.5	1148.4	1182.9
52.5°	857.0	917.3	1020.8	1101.8	1136.3
55°	793.2	862.2	967.3	1051.8	1088.0
57.5°	729.4	803.5	912.2	1000.1	1036.3
60°	667.3	743.2	857.0	944.9	982.9
62.5°	605.2	681.1	800.1	889.7	926.0
65°	539.7	619.0	738.0	829.4	865.6
67.5°	474.2	557.0	675.9	767.3	801.8
70°	405.2	493.2	612.1	701.8	736.3
72.5°	341.4	429.4	546.6	634.5	667.3
75°	277.6	365.6	479.4	560.4	582.8
77.5°	215.5	303.5	405.2	458.7	463.8
80°	156.9	239.7	322.4	338.0	336.2
82.5°	105.2	179.3	222.4	224.2	229.3
85°	60.4	112.1	122.4	120.7	122.4
87.5°	24.1	39.7	34.5	25.9	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)