

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: P389018

Luminaire Tested: **24CZ2-65VHE-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: P389018
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: 24CZ2-65VHE-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: 5202.0 lumens
Efficiency: N/A
Efficacy: 123.3 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

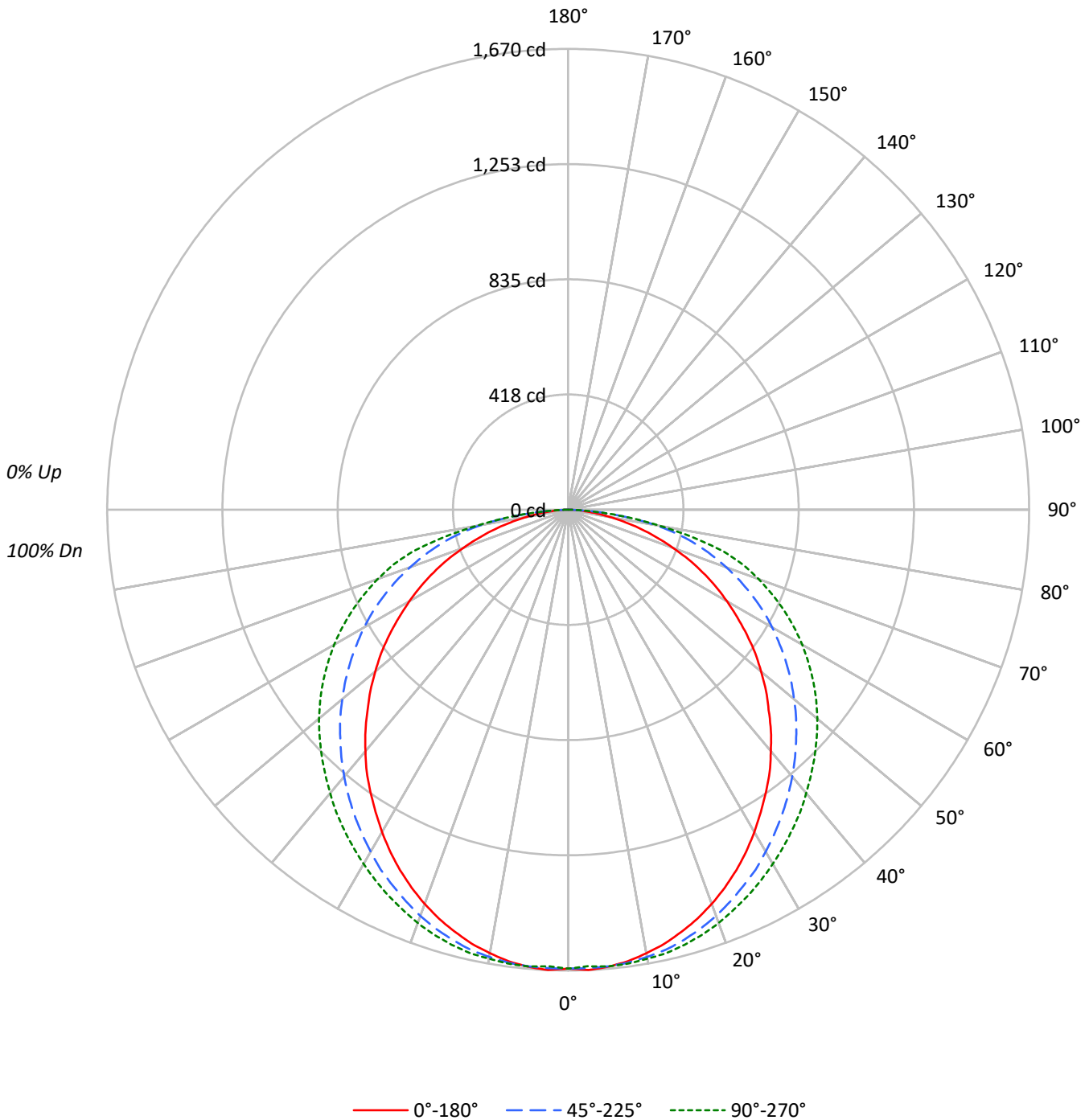
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2237	2237	2237
5°	2246	2244	2244
10°	2230	2248	2258
15°	2206	2249	2273
20°	2177	2243	2282
25°	2140	2231	2290
30°	2095	2223	2303
35°	2051	2218	2325
40°	2006	2218	2356
45°	1955	2223	2402
50°	1909	2237	2467
55°	1854	2261	2543
60°	1789	2297	2635
65°	1712	2341	2745
70°	1588	2399	2886
75°	1438	2482	3018
80°	1211	2489	2596
85°	928	1883	1883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.8	3.0
10°-20°	454.1	8.7
20°-30°	689.8	13.3
30°-40°	839.0	16.1
40°-50°	893.3	17.2
50°-60°	850.8	16.4
60°-70°	711.5	13.7
70°-80°	474.4	9.1
80°-90°	131.3	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°	1301.7	25.0
0°-40°	2140.7	41.2
0°-60°	3884.8	74.7
0°-90°	5202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1663	1663	1663	1663	1663	
5°	1663	1652	1661	1661	1661	158
15°	1584	1587	1615	1627	1632	447
25°	1441	1460	1503	1529	1543	664
35°	1249	1285	1350	1395	1416	781
45°	1027	1082	1168	1233	1263	794
55°	790	859	964	1048	1084	706
65°	538	617	735	826	862	531
75°	277	364	478	558	581	293
85°	60	112	122	120	122	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1662.8	1662.8	1662.8	1662.8	1662.8
2.5°	1669.7	1657.7	1662.8	1662.8	1655.9
5°	1662.8	1652.5	1661.1	1661.1	1661.1
7.5°	1650.8	1642.2	1655.9	1659.4	1659.4
10°	1631.9	1628.5	1645.6	1650.8	1652.5
12.5°	1611.3	1609.6	1633.6	1640.5	1645.6
15°	1583.8	1587.2	1614.7	1626.7	1631.9
17.5°	1554.6	1561.5	1592.4	1609.6	1614.7
20°	1520.2	1530.5	1566.6	1583.8	1594.1
22.5°	1482.4	1497.9	1535.7	1556.3	1568.3
25°	1441.2	1460.1	1503.1	1528.8	1542.6
27.5°	1396.6	1420.6	1470.4	1499.6	1513.4
30°	1348.5	1375.9	1430.9	1465.3	1482.4
32.5°	1298.6	1331.3	1391.4	1429.2	1449.8
35°	1248.8	1284.9	1350.2	1394.8	1415.5
37.5°	1199.0	1235.1	1307.2	1355.3	1381.1
40°	1142.3	1185.3	1262.6	1315.8	1341.6
42.5°	1087.4	1133.7	1216.2	1274.6	1302.1
45°	1027.2	1082.2	1168.1	1233.4	1262.6
47.5°	972.3	1027.2	1120.0	1188.7	1221.3
50°	912.1	970.5	1068.5	1144.0	1178.4
52.5°	853.7	913.9	1016.9	1097.7	1132.0
55°	790.2	858.9	963.7	1047.8	1083.9
57.5°	726.6	800.5	908.7	996.3	1032.4
60°	664.8	740.4	853.7	941.3	979.1
62.5°	602.9	678.5	797.1	886.4	922.4
65°	537.7	616.7	735.2	826.3	862.3
67.5°	472.4	554.8	673.4	764.4	798.8
70°	403.7	491.3	609.8	699.1	733.5
72.5°	340.1	427.7	544.5	632.1	664.8
75°	276.6	364.2	477.5	558.3	580.6
77.5°	214.7	302.3	403.7	456.9	462.1
80°	156.3	238.8	321.2	336.7	335.0
82.5°	104.8	178.6	221.6	223.3	228.5
85°	60.1	111.7	122.0	120.2	122.0
87.5°	24.0	39.5	34.4	25.8	25.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)