

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: P389016

Luminaire Tested: **24CZ2-65VHE-SQR-UNV-L930-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: P389016  
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-SDWPD1-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: 5075.5 lumens  
Efficiency: N/A  
Efficacy: 120.3 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

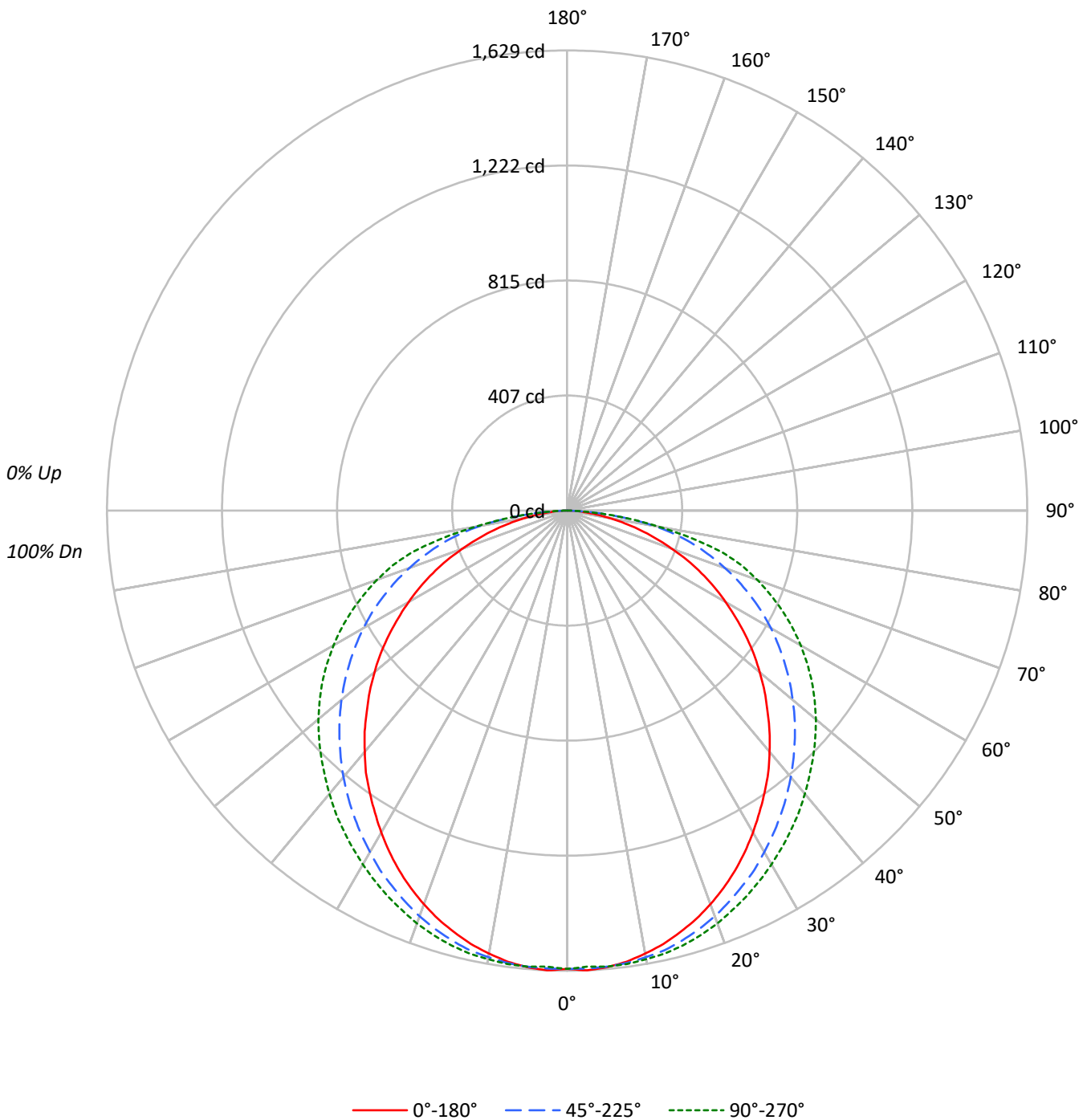
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2183	2183	2183
5°	2191	2189	2189
10°	2175	2194	2203
15°	2153	2194	2218
20°	2124	2189	2227
25°	2088	2177	2234
30°	2044	2169	2247
35°	2001	2164	2268
40°	1958	2164	2299
45°	1907	2169	2344
50°	1863	2182	2407
55°	1809	2206	2481
60°	1745	2242	2571
65°	1670	2284	2679
70°	1550	2341	2816
75°	1403	2422	2945
80°	1182	2428	2532
85°	906	1837	1837



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.0	3.0
10°-20°	443.1	8.7
20°-30°	673.0	13.3
30°-40°	818.6	16.1
40°-50°	871.6	17.2
50°-60°	830.1	16.4
60°-70°	694.2	13.7
70°-80°	462.8	9.1
80°-90°	128.1	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°	1270.1	25.0
0°-40°	2088.7	41.2
0°-60°	3790.4	74.7
0°-90°	5075.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5075.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1622	1622	1622	1622	1622	
5°	1622	1612	1621	1621	1621	154
15°	1545	1549	1575	1587	1592	436
25°	1406	1425	1466	1492	1505	647
35°	1218	1254	1317	1361	1381	762
45°	1002	1056	1140	1203	1232	775
55°	771	838	940	1022	1058	689
65°	525	602	717	806	841	518
75°	270	355	466	545	566	286
85°	59	109	119	117	119	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1622.4	1622.4	1622.4	1622.4	1622.4
2.5°	1629.1	1617.3	1622.4	1622.4	1615.7
5°	1622.4	1612.3	1620.7	1620.7	1620.7
7.5°	1610.6	1602.3	1615.7	1619.0	1619.0
10°	1592.2	1588.9	1605.6	1610.6	1612.3
12.5°	1572.1	1570.4	1593.9	1600.6	1605.6
15°	1545.3	1548.6	1575.4	1587.2	1592.2
17.5°	1516.8	1523.5	1553.7	1570.4	1575.4
20°	1483.3	1493.3	1528.5	1545.3	1555.3
22.5°	1446.4	1461.5	1498.4	1518.5	1530.2
25°	1406.2	1424.6	1466.5	1491.6	1505.1
27.5°	1362.6	1386.1	1434.7	1463.2	1476.6
30°	1315.7	1342.5	1396.1	1429.6	1446.4
32.5°	1267.1	1298.9	1357.6	1394.4	1414.6
35°	1218.5	1253.7	1317.3	1360.9	1381.0
37.5°	1169.9	1205.1	1275.4	1322.4	1347.5
40°	1114.5	1156.4	1231.9	1283.8	1309.0
42.5°	1060.9	1106.2	1186.6	1243.6	1270.4
45°	1002.3	1055.9	1139.7	1203.4	1231.9
47.5°	948.6	1002.3	1092.8	1159.8	1191.6
50°	890.0	946.9	1042.5	1116.2	1149.7
52.5°	833.0	891.6	992.2	1071.0	1104.5
55°	771.0	838.0	940.2	1022.4	1057.6
57.5°	709.0	781.0	886.6	972.1	1007.3
60°	648.6	722.4	833.0	918.5	955.3
62.5°	588.3	662.0	777.7	864.8	900.0
65°	524.6	601.7	717.3	806.2	841.4
67.5°	460.9	541.4	657.0	745.8	779.3
70°	393.9	479.3	595.0	682.1	715.7
72.5°	331.8	417.3	531.3	616.8	648.6
75°	269.8	355.3	465.9	544.7	566.5
77.5°	209.5	295.0	393.9	445.8	450.8
80°	152.5	233.0	313.4	328.5	326.8
82.5°	102.2	174.3	216.2	217.9	222.9
85°	58.7	108.9	119.0	117.3	119.0
87.5°	23.5	38.5	33.5	25.1	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)