

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: P388969

Luminaire Tested: **24CZ2-65-SQR-UNV-L930-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: P388969  
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: 24CZ2-65-SQR-UNV-L930-CD1-SWPD1-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: 5142.9 lumens  
Efficiency: N/A  
Efficacy: 81.9 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

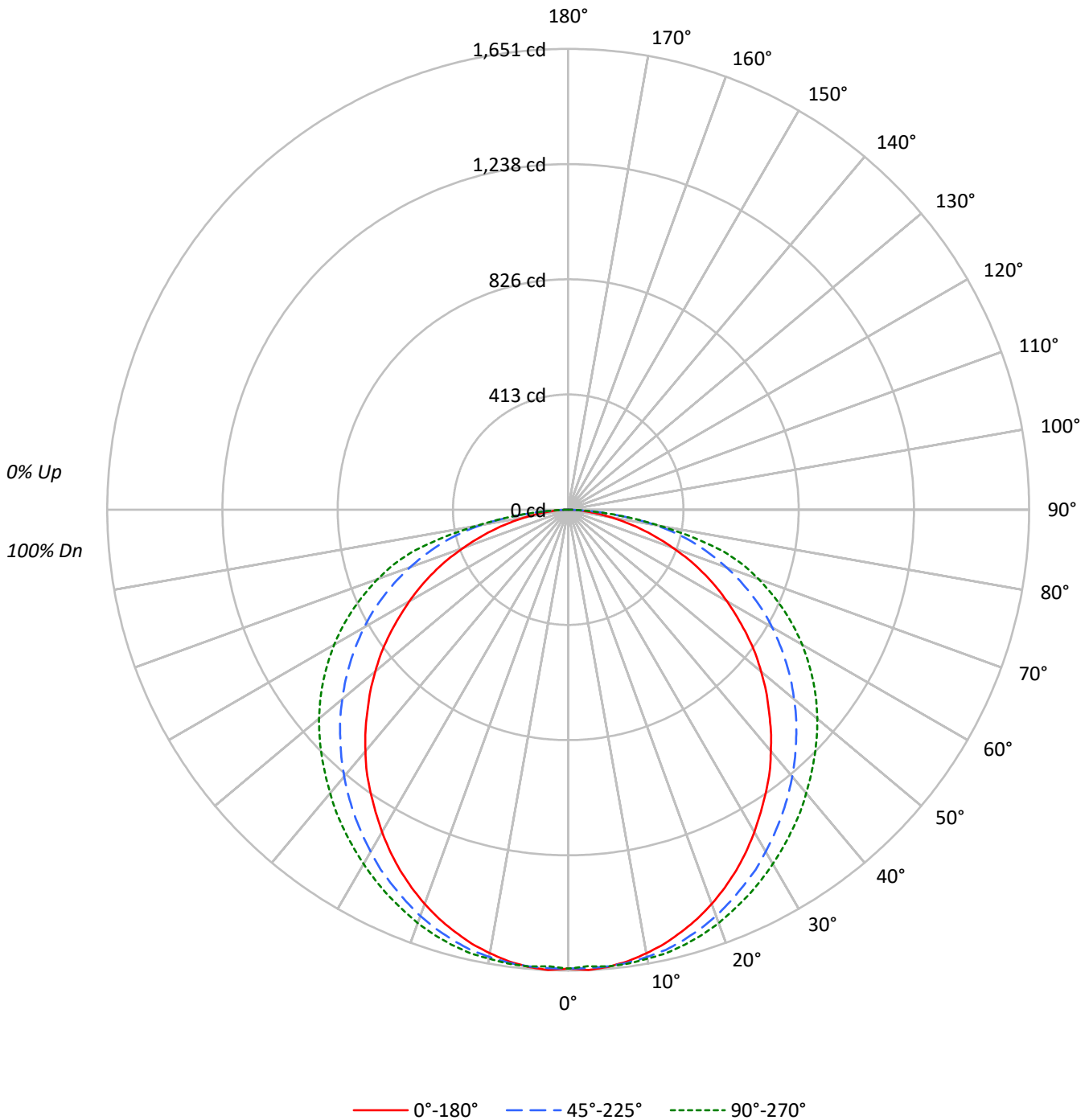
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388969

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L930-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388969

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L930-CD1-SWPD1-U

**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°	2212	2212	2212
5°	2220	2218	2218
10°	2204	2223	2232
15°	2181	2224	2247
20°	2152	2218	2257
25°	2115	2206	2264
30°	2071	2198	2277
35°	2028	2192	2299
40°	1984	2192	2330
45°	1932	2197	2375
50°	1888	2211	2439
55°	1833	2235	2514
60°	1769	2271	2605
65°	1692	2314	2714
70°	1570	2372	2853
75°	1421	2454	2984
80°	1197	2461	2566
85°	917	1862	1862



TEST NUMBER: P388969

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L930-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.0	3.0
10°-20°	449.0	8.7
20°-30°	681.9	13.3
30°-40°	829.5	16.1
40°-50°	883.1	17.2
50°-60°	841.1	16.4
60°-70°	703.4	13.7
70°-80°	469.0	9.1
80°-90°	129.8	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°	1286.9	25.0
0°-40°	2116.4	41.2
0°-60°	3840.7	74.7
0°-90°	5142.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5142.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1644	1644	1644	1644	1644	
5°	1644	1634	1642	1642	1642	156
15°	1566	1569	1596	1608	1613	442
25°	1425	1444	1486	1512	1525	656
35°	1235	1270	1335	1379	1399	773
45°	1016	1070	1155	1219	1248	785
55°	781	849	953	1036	1072	698
65°	532	610	727	817	852	525
75°	273	360	472	552	574	290
85°	59	110	121	119	121	72
90°	0	0	0	0	0	



TEST NUMBER: P388969

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L930-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1643.9	1643.9	1643.9	1643.9	1643.9
2.5°	1650.7	1638.8	1643.9	1643.9	1637.1
5°	1643.9	1633.7	1642.2	1642.2	1642.2
7.5°	1632.0	1623.5	1637.1	1640.5	1640.5
10°	1613.4	1610.0	1626.9	1632.0	1633.7
12.5°	1593.0	1591.3	1615.1	1621.8	1626.9
15°	1565.8	1569.2	1596.4	1608.3	1613.4
17.5°	1536.9	1543.7	1574.3	1591.3	1596.4
20°	1503.0	1513.2	1548.8	1565.8	1576.0
22.5°	1465.6	1480.9	1518.2	1538.6	1550.5
25°	1424.8	1443.5	1486.0	1511.5	1525.0
27.5°	1380.7	1404.5	1453.7	1482.6	1496.2
30°	1333.1	1360.3	1414.7	1448.6	1465.6
32.5°	1283.9	1316.2	1375.6	1413.0	1433.3
35°	1234.6	1270.3	1334.8	1379.0	1399.4
37.5°	1185.4	1221.1	1292.4	1339.9	1365.4
40°	1129.3	1171.8	1248.2	1300.9	1326.3
42.5°	1075.0	1120.9	1202.4	1260.1	1287.3
45°	1015.6	1069.9	1154.8	1219.4	1248.2
47.5°	961.2	1015.6	1107.3	1175.2	1207.5
50°	901.8	959.5	1056.3	1131.0	1165.0
52.5°	844.0	903.5	1005.4	1085.2	1119.2
55°	781.2	849.1	952.7	1035.9	1071.6
57.5°	718.4	791.4	898.4	985.0	1020.7
60°	657.2	732.0	844.0	930.6	968.0
62.5°	596.1	670.8	788.0	876.3	912.0
65°	531.6	609.7	726.9	816.9	852.5
67.5°	467.0	548.5	665.7	755.7	789.7
70°	399.1	485.7	602.9	691.2	725.2
72.5°	336.3	422.9	538.4	625.0	657.2
75°	273.4	360.0	472.1	551.9	574.0
77.5°	212.3	298.9	399.1	451.7	456.8
80°	154.5	236.1	317.6	332.9	331.2
82.5°	103.6	176.6	219.1	220.8	225.9
85°	59.4	110.4	120.6	118.9	120.6
87.5°	23.8	39.1	34.0	25.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)