

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: P387649

Luminaire Tested: **22CZ2-20-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: P387649  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20-SQR-UNV-L930-CD1-SWPD1-U  
Description: 2x2 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: 1644.1 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

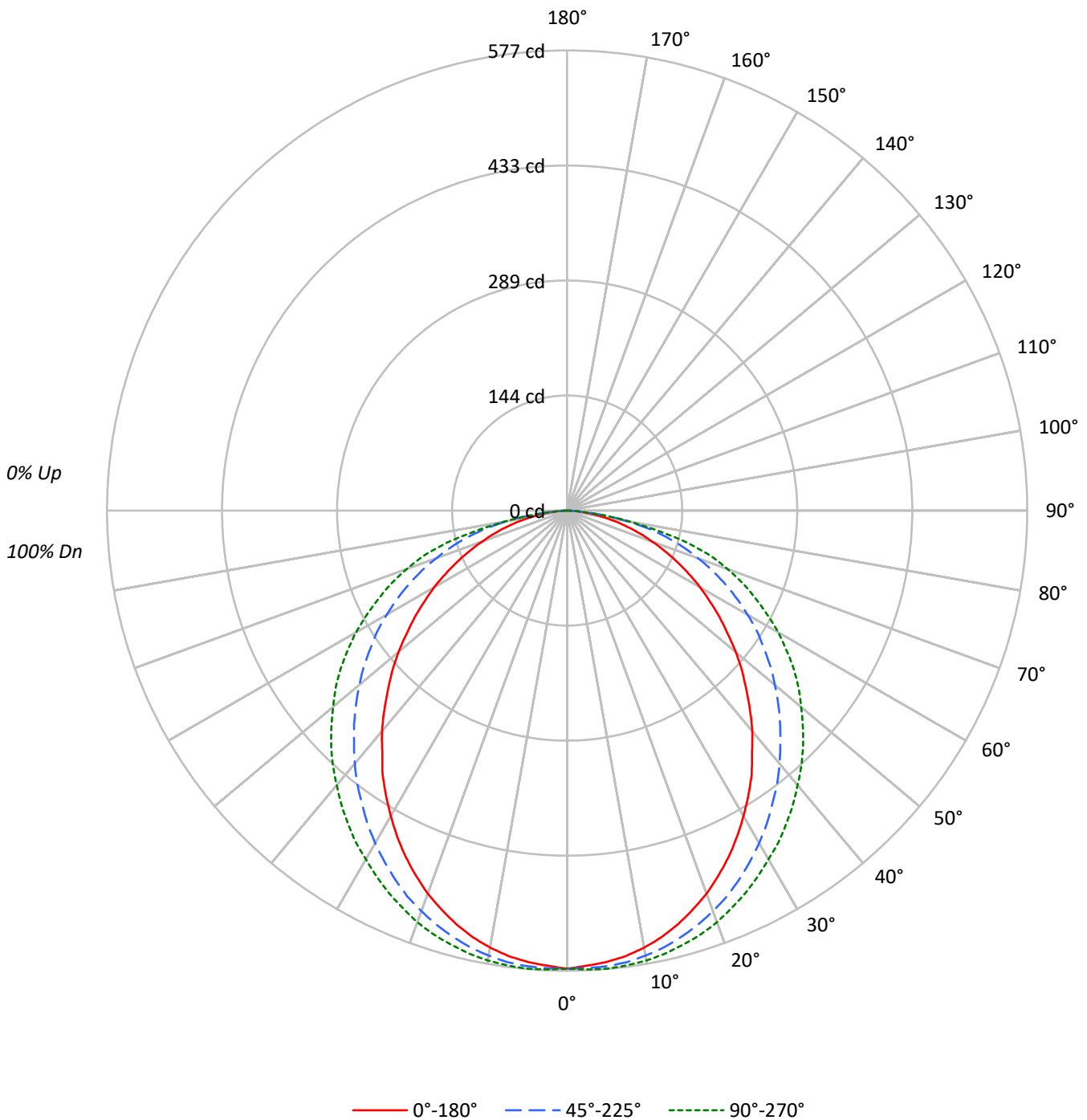
Input Watts (W): 17.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P387649

CATALOG NUMBER: 22CZ2-20-SQR-UNV-L930-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P387649

CATALOG NUMBER: 22CZ2-20-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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1545	1545	1545
5°	1535	1549	1558
10°	1520	1548	1565
15°	1496	1541	1570
20°	1464	1531	1573
25°	1423	1515	1571
30°	1375	1496	1569
35°	1325	1474	1574
40°	1269	1456	1579
45°	1209	1437	1592
50°	1156	1424	1604
55°	1095	1413	1629
60°	1037	1407	1646
65°	969	1396	1659
70°	890	1375	1682
75°	804	1339	1623
80°	690	1185	1221
85°	553	698	553



TEST NUMBER: P387649

CATALOG NUMBER: 22CZ2-20-SQR-UNV-L930-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	3.3
10°-20°	155.7	9.5
20°-30°	233.8	14.2
30°-40°	278.9	17.0
40°-50°	288.3	17.5
50°-60°	265.1	16.1
60°-70°	211.0	12.8
70°-80°	128.9	7.8
80°-90°	28.0	1.7
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°	443.9	27.0
0°-40°	722.8	44.0
0°-60°	1276.1	77.6
0°-90°	1644.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1644.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	568	570	574	576	577	54
15°	537	543	553	561	563	151
25°	479	491	510	524	529	220
35°	403	421	449	472	479	252
45°	318	340	378	408	418	246
55°	233	259	301	336	347	209
65°	152	178	219	250	261	151
75°	77	100	129	151	156	82
85°	18	22	23	20	18	21
90°	0	0	0	0	0	



TEST NUMBER: P387649

CATALOG NUMBER: 22CZ2-20-SQR-UNV-L930-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	574.3	574.3	574.3	574.3	574.3
2.5°	571.2	572.0	574.3	575.9	575.9
5°	568.1	569.6	573.5	575.9	576.7
7.5°	563.4	565.7	571.2	574.3	575.1
10°	556.4	559.5	566.5	571.2	572.8
12.5°	547.8	552.5	561.1	567.3	568.9
15°	536.9	543.1	553.3	561.1	563.4
17.5°	524.4	532.2	544.7	554.0	557.2
20°	511.1	518.9	534.5	545.5	549.4
22.5°	495.5	505.7	523.6	536.1	539.2
25°	479.1	490.8	510.3	524.4	529.1
27.5°	461.2	475.2	496.3	513.5	517.4
30°	442.4	457.3	481.5	500.2	504.9
32.5°	422.9	440.1	465.9	486.9	493.2
35°	403.4	420.6	448.7	472.1	479.1
37.5°	380.8	401.1	432.3	456.5	465.1
40°	361.3	380.8	414.4	440.9	449.5
42.5°	339.4	360.5	395.6	424.5	434.6
45°	317.6	340.2	377.7	408.1	418.3
47.5°	297.3	319.9	359.0	390.9	401.1
50°	276.2	299.6	340.2	373.0	383.1
52.5°	253.6	279.4	321.5	354.3	366.0
55°	233.3	259.1	301.2	335.5	347.2
57.5°	212.3	238.8	282.5	315.3	326.2
60°	192.7	218.5	261.4	293.4	305.9
62.5°	171.7	198.2	240.3	271.6	283.3
65°	152.2	177.9	219.3	249.7	260.6
67.5°	132.7	158.4	197.4	226.3	238.8
70°	113.1	138.9	174.8	202.9	213.8
72.5°	96.0	118.6	152.9	178.7	188.8
75°	77.3	99.9	128.8	151.4	156.1
77.5°	60.1	80.4	104.6	114.7	116.3
80°	44.5	60.1	76.5	78.8	78.8
82.5°	29.7	41.4	47.6	48.4	47.6
85°	17.9	21.8	22.6	19.5	17.9
87.5°	6.2	6.2	3.9	2.3	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)