

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: P390813

Luminaire Tested: **22CZ2-90VHE-RDP-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: P390813  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-90VHE-RDP-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4940.5 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

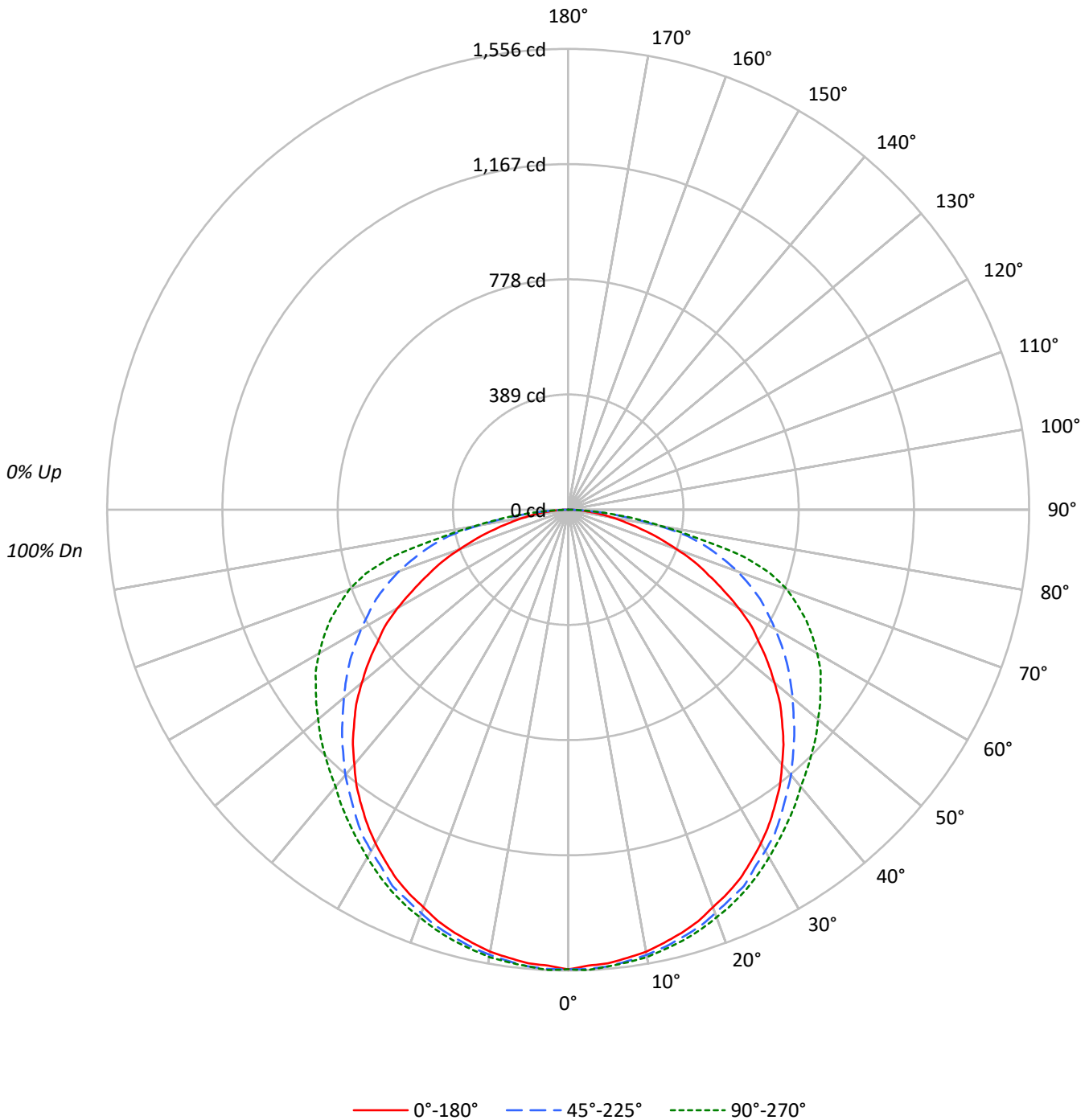
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390813

CATALOG NUMBER: 22CZ2-90VHE-RDP-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390813

CATALOG NUMBER: 22CZ2-90VHE-RDP-UNV-L930-CD1-SDWPD1-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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	4176	4176	4176
5°	4153	4182	4182
10°	4141	4171	4191
15°	4121	4161	4192
20°	4090	4153	4194
25°	4079	4165	4208
30°	4043	4133	4212
35°	4000	4119	4238
40°	3945	4111	4290
45°	3887	4108	4426
50°	3804	4139	4610
55°	3700	4229	4876
60°	3580	4342	5223
65°	3333	4559	5647
70°	3060	4775	6176
75°	2682	5026	6386
80°	2309	4787	5013
85°	2019	3480	3816



TEST NUMBER: P390813

CATALOG NUMBER: 22CZ2-90VHE-RDP-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.8	3.0
10°-20°	421.5	8.5
20°-30°	643.1	13.0
30°-40°	785.2	15.9
40°-50°	839.5	17.0
50°-60°	810.4	16.4
60°-70°	697.6	14.1
70°-80°	472.0	9.6
80°-90°	124.5	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°	1211.3	24.5
0°-40°	1996.5	40.4
0°-60°	3646.4	73.8
0°-90°	4940.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4940.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1537	1541	1548	1548	1548	146
15°	1479	1483	1494	1501	1505	417
25°	1374	1381	1403	1410	1417	632
35°	1218	1228	1254	1279	1290	762
45°	1021	1039	1079	1134	1163	788
55°	789	814	901	992	1039	707
65°	523	574	716	829	887	521
75°	258	342	483	582	614	277
85°	65	91	113	116	124	74
90°	0	0	0	0	0	



TEST NUMBER: P390813

CATALOG NUMBER: 22CZ2-90VHE-RDP-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1551.9	1551.9	1551.9	1551.9	1551.9
2.5°	1541.0	1544.6	1551.9	1551.9	1555.5
5°	1537.4	1541.0	1548.3	1548.3	1548.3
7.5°	1526.5	1530.1	1537.4	1541.0	1541.0
10°	1515.6	1519.2	1526.5	1530.1	1533.7
12.5°	1497.4	1501.0	1511.9	1519.2	1519.2
15°	1479.2	1482.8	1493.7	1501.0	1504.6
17.5°	1457.4	1464.7	1475.6	1482.8	1486.5
20°	1428.3	1435.6	1450.1	1461.0	1464.7
22.5°	1402.9	1410.2	1424.7	1435.6	1442.9
25°	1373.8	1381.1	1402.9	1410.2	1417.4
27.5°	1337.5	1344.7	1362.9	1377.4	1388.3
30°	1301.1	1308.4	1330.2	1348.4	1355.6
32.5°	1261.1	1272.0	1297.5	1312.0	1322.9
35°	1217.5	1228.4	1253.9	1279.3	1290.2
37.5°	1173.9	1184.8	1210.3	1243.0	1257.5
40°	1123.0	1137.6	1170.3	1213.9	1221.2
42.5°	1075.8	1094.0	1123.0	1173.9	1192.1
45°	1021.3	1039.4	1079.4	1133.9	1163.0
47.5°	970.4	988.6	1032.2	1097.6	1133.9
50°	908.6	934.0	988.6	1064.9	1101.2
52.5°	850.5	872.3	944.9	1028.5	1072.2
55°	788.7	814.1	901.3	992.2	1039.4
57.5°	734.2	756.0	854.1	955.9	1010.4
60°	665.1	694.2	806.8	915.9	970.4
62.5°	592.4	636.0	759.6	872.3	930.4
65°	523.4	574.2	716.0	828.6	886.8
67.5°	461.6	516.1	661.5	781.4	835.9
70°	388.9	457.9	606.9	723.2	785.0
72.5°	323.5	399.8	545.2	661.5	716.0
75°	258.0	341.6	483.4	581.5	614.2
77.5°	199.9	279.9	414.3	443.4	447.0
80°	149.0	221.7	308.9	312.6	323.5
82.5°	101.8	156.3	199.9	218.1	221.7
85°	65.4	90.9	112.7	116.3	123.6
87.5°	29.1	32.7	40.0	36.3	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)