

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: P387553

Luminaire Tested: **14CZ2-48HE-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: P387553  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1911-580-2)  
Test Lab: INNOVATIONS CENTER(G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-48HE-SQR-UNV-L930-CD1-SWPD1-U  
Description: 1x4 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: 3774.3 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.34 / 1.44  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

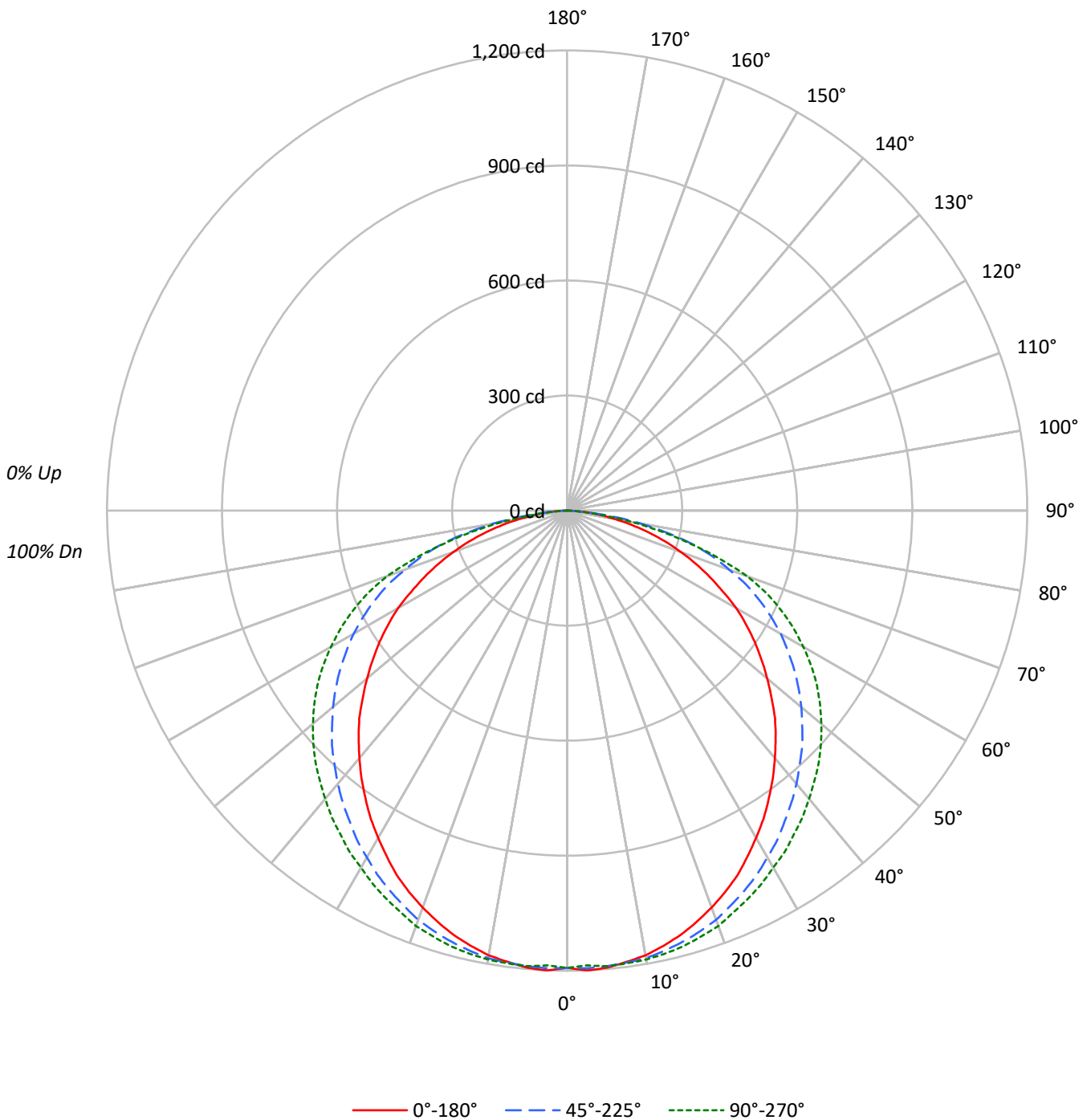
Input Watts (W): 36.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P387553

CATALOG NUMBER: 14CZ2-48HE-SQR-UNV-L930-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P387553

CATALOG NUMBER: 14CZ2-48HE-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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	51	60	54	50	48
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	68	55	45	39	67	54	45	39	52	44	38	50	43	38	49	42	38	35
7	63	49	40	34	62	49	40	34	47	39	34	46	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	41	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°	3210	3210	3210
5°	3232	3222	3222
10°	3218	3238	3249
15°	3190	3243	3275
20°	3154	3252	3301
25°	3118	3248	3315
30°	3062	3245	3340
35°	3012	3250	3387
40°	2960	3268	3448
45°	2917	3301	3533
50°	2851	3337	3623
55°	2802	3392	3730
60°	2744	3461	3829
65°	2616	3525	3924
70°	2485	3532	3921
75°	2275	3520	3461
80°	1945	3006	2682
85°	1528	1704	997



TEST NUMBER: P387553

CATALOG NUMBER: 14CZ2-48HE-SQR-UNV-L930-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.4	3.0
10°-20°	327.4	8.7
20°-30°	500.7	13.3
30°-40°	613.8	16.3
40°-50°	660.1	17.5
50°-60°	634.3	16.8
60°-70°	528.2	14.0
70°-80°	324.2	8.6
80°-90°	72.2	1.9
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°	941.5	24.9
0°-40°	1555.3	41.2
0°-60°	2849.7	75.5
0°-90°	3774.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3774.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1193	1193	1193	1193	1193	
5°	1196	1185	1193	1193	1193	114
15°	1145	1141	1164	1172	1176	323
25°	1050	1060	1094	1107	1117	483
35°	917	940	989	1016	1031	574
45°	767	801	867	907	928	590
55°	597	649	723	772	795	534
65°	411	474	554	599	616	407
75°	219	285	339	337	333	232
85°	50	74	55	38	32	59
90°	0	0	0	0	0	



TEST NUMBER: P387553

CATALOG NUMBER: 14CZ2-48HE-SQR-UNV-L930-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1192.7	1192.7	1192.7	1192.7	1192.7
2.5°	1200.3	1188.9	1194.6	1192.7	1187.0
5°	1196.5	1185.1	1192.7	1192.7	1192.7
7.5°	1187.0	1177.5	1188.9	1190.8	1190.8
10°	1177.5	1169.9	1185.1	1187.0	1188.9
12.5°	1162.3	1156.6	1175.6	1179.4	1183.2
15°	1145.2	1141.4	1164.2	1171.8	1175.6
17.5°	1124.2	1126.1	1150.9	1160.4	1164.2
20°	1101.4	1107.1	1135.6	1145.2	1152.8
22.5°	1076.7	1084.3	1114.7	1126.1	1133.7
25°	1050.0	1059.6	1093.8	1107.1	1116.6
27.5°	1017.7	1032.9	1071.0	1088.1	1097.6
30°	985.4	1002.5	1044.3	1065.3	1074.8
32.5°	953.0	972.1	1019.6	1040.5	1055.7
35°	916.9	939.7	989.2	1015.8	1031.0
37.5°	880.7	907.4	960.6	991.1	1008.2
40°	842.7	871.2	930.2	964.4	981.6
42.5°	804.7	837.0	897.9	935.9	954.9
45°	766.6	800.8	867.4	907.4	928.3
47.5°	722.9	764.7	831.3	876.9	897.9
50°	681.0	726.7	797.0	844.6	865.5
52.5°	639.2	686.7	760.9	810.4	831.3
55°	597.3	648.7	722.9	772.3	795.1
57.5°	553.6	606.8	682.9	734.3	755.2
60°	509.8	565.0	643.0	690.5	711.4
62.5°	458.4	523.1	599.2	646.8	665.8
65°	410.9	473.7	553.6	599.2	616.3
67.5°	363.3	428.0	506.0	547.8	563.1
70°	315.8	380.5	448.9	488.9	498.4
72.5°	268.2	332.9	397.6	420.4	416.6
75°	218.8	285.3	338.6	336.7	332.9
77.5°	171.2	235.9	268.2	254.9	249.2
80°	125.5	188.3	194.0	180.7	173.1
82.5°	85.6	135.1	121.7	106.5	98.9
85°	49.5	74.2	55.2	38.0	32.3
87.5°	20.9	19.0	5.7	5.7	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)