

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: P387388

Luminaire Tested: **14CZ2-20-SQR-UNV-L935-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: P387388  
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: 14CZ2-20-SQR-UNV-L935-CD1-SWPD1-U  
Description: 1x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1610.2 lumens  
Efficiency: N/A  
Efficacy: 98.8 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

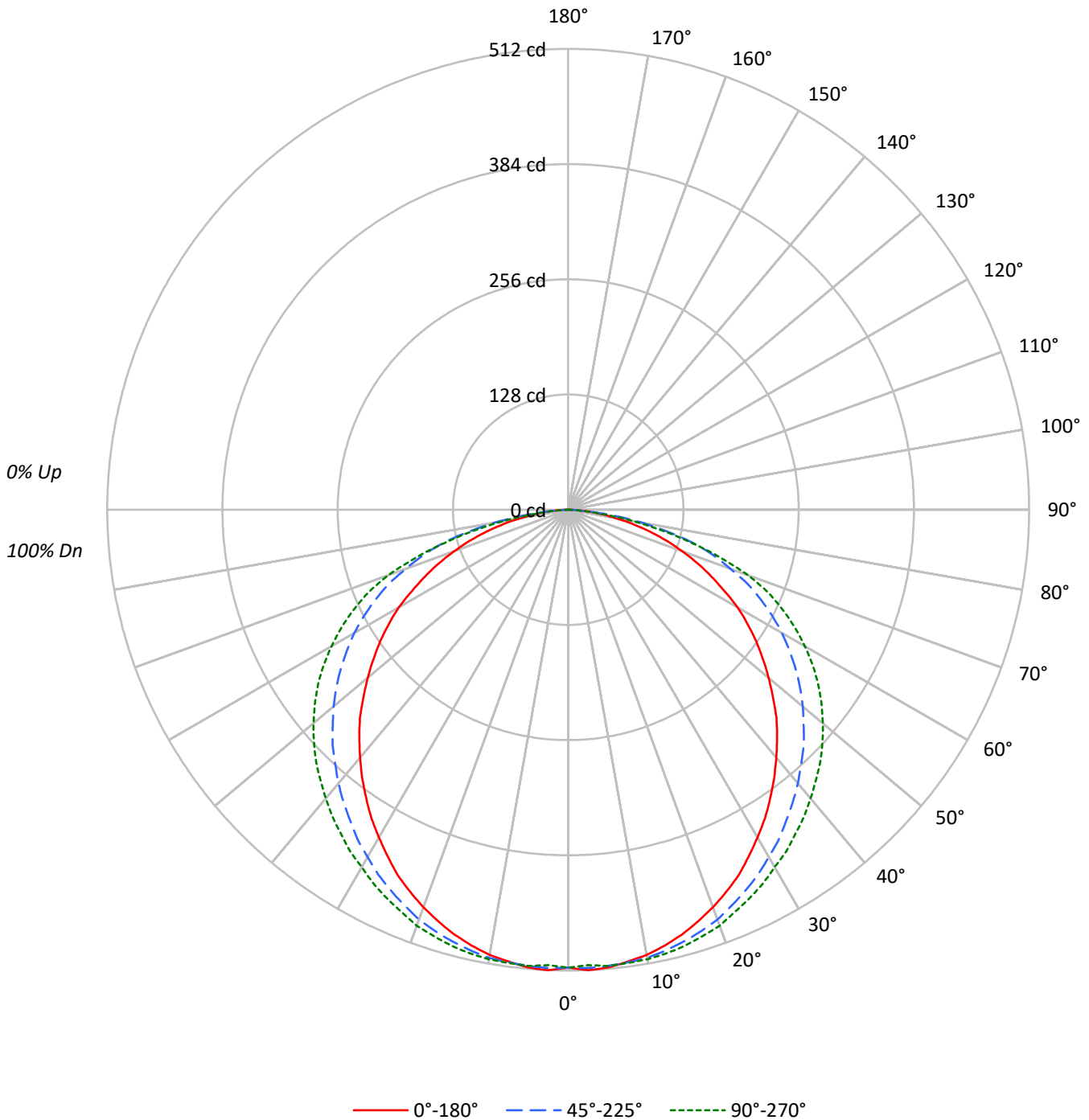
Input Watts (W): 16.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P387388

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L935-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P387388

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L935-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°	1369	1369	1369
5°	1379	1374	1374
10°	1373	1382	1386
15°	1361	1384	1397
20°	1346	1387	1408
25°	1330	1385	1415
30°	1306	1384	1425
35°	1285	1386	1445
40°	1263	1394	1471
45°	1245	1408	1507
50°	1216	1423	1546
55°	1195	1447	1591
60°	1171	1476	1633
65°	1116	1504	1674
70°	1060	1507	1673
75°	970	1502	1476
80°	831	1283	1145
85°	651	726	426



TEST NUMBER: P387388

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L935-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.4	3.0
10°-20°	139.7	8.7
20°-30°	213.6	13.3
30°-40°	261.9	16.3
40°-50°	281.6	17.5
50°-60°	270.6	16.8
60°-70°	225.3	14.0
70°-80°	138.3	8.6
80°-90°	30.8	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°	401.7	24.9
0°-40°	663.5	41.2
0°-60°	1215.8	75.5
0°-90°	1610.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1610.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	510	506	509	509	509	48
15°	488	487	497	500	502	138
25°	448	452	467	472	476	206
35°	391	401	422	433	440	245
45°	327	342	370	387	396	252
55°	255	277	308	330	339	228
65°	175	202	236	256	263	174
75°	93	122	144	144	142	99
85°	21	32	24	16	14	25
90°	0	0	0	0	0	



TEST NUMBER: P387388

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L935-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	508.8	508.8	508.8	508.8	508.8
2.5°	512.1	507.2	509.6	508.8	506.4
5°	510.5	505.6	508.8	508.8	508.8
7.5°	506.4	502.3	507.2	508.0	508.0
10°	502.3	499.1	505.6	506.4	507.2
12.5°	495.9	493.4	501.5	503.2	504.8
15°	488.5	486.9	496.7	499.9	501.5
17.5°	479.6	480.4	491.0	495.0	496.7
20°	469.9	472.3	484.5	488.5	491.8
22.5°	459.3	462.6	475.6	480.4	483.7
25°	448.0	452.0	466.6	472.3	476.4
27.5°	434.2	440.7	456.9	464.2	468.3
30°	420.4	427.7	445.5	454.5	458.5
32.5°	406.6	414.7	435.0	443.9	450.4
35°	391.2	400.9	422.0	433.4	439.9
37.5°	375.7	387.1	409.8	422.8	430.1
40°	359.5	371.7	396.8	411.5	418.8
42.5°	343.3	357.1	383.0	399.3	407.4
45°	327.1	341.7	370.1	387.1	396.0
47.5°	308.4	326.2	354.6	374.1	383.0
50°	290.5	310.0	340.0	360.3	369.3
52.5°	272.7	293.0	324.6	345.7	354.6
55°	254.8	276.7	308.4	329.5	339.2
57.5°	236.2	258.9	291.3	313.3	322.2
60°	217.5	241.0	274.3	294.6	303.5
62.5°	195.6	223.2	255.6	275.9	284.0
65°	175.3	202.1	236.2	255.6	262.9
67.5°	155.0	182.6	215.9	233.7	240.2
70°	134.7	162.3	191.5	208.6	212.6
72.5°	114.4	142.0	169.6	179.4	177.7
75°	93.3	121.7	144.5	143.6	142.0
77.5°	73.0	100.6	114.4	108.7	106.3
80°	53.6	80.3	82.8	77.1	73.9
82.5°	36.5	57.6	51.9	45.4	42.2
85°	21.1	31.7	23.5	16.2	13.8
87.5°	8.9	8.1	2.4	2.4	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)