

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: P390146

Luminaire Tested: **22CZ2-20VHE-RDP-UNV-L935-CD1-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: P390146  
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: 22CZ2-20VHE-RDP-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1141.8 lumens  
Efficiency: N/A  
Efficacy: 80.4 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

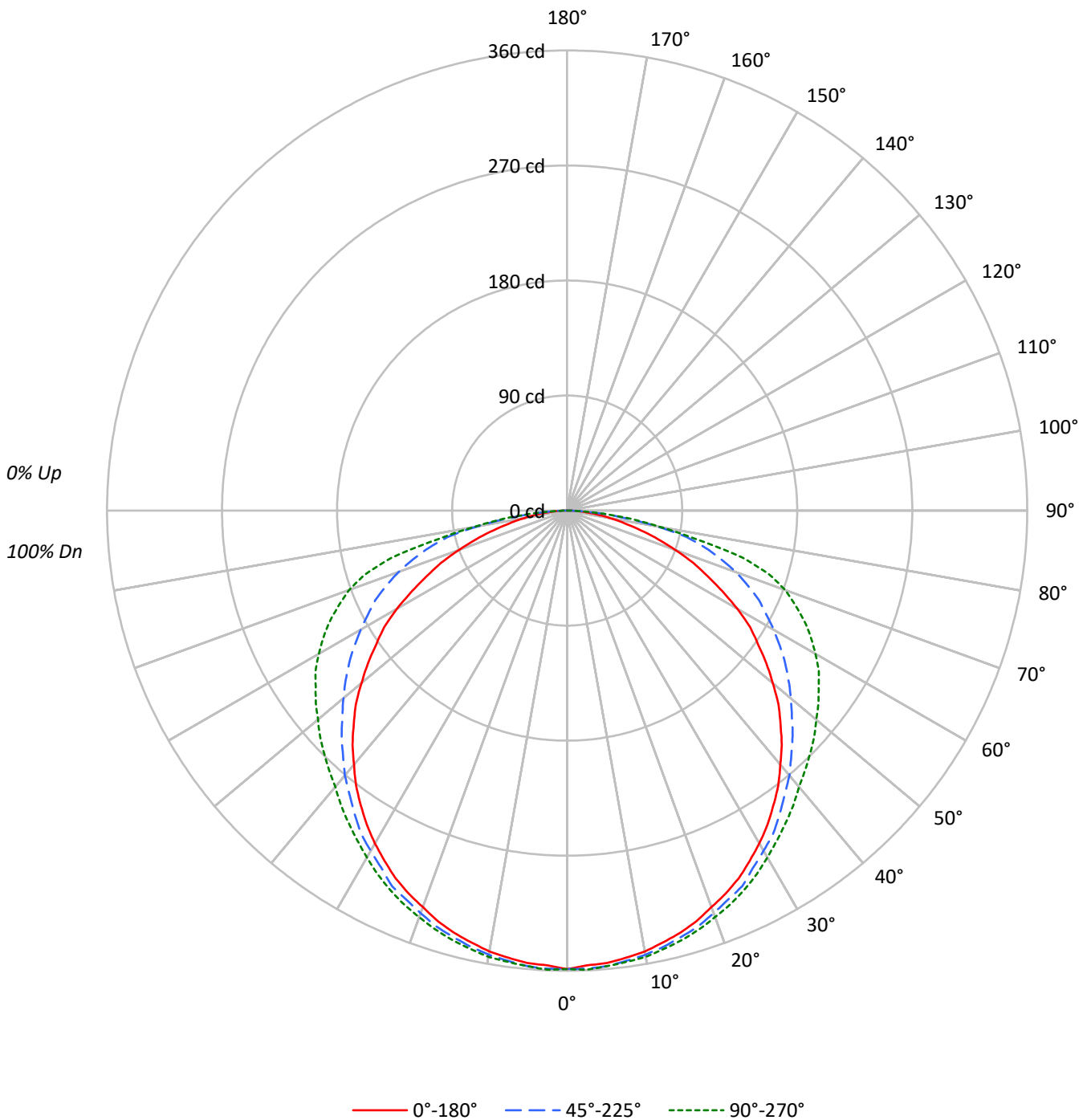
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390146

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390146

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L935-CD1-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°	965	965	965
5°	960	967	967
10°	957	964	969
15°	953	962	969
20°	945	960	969
25°	943	963	973
30°	934	955	974
35°	924	952	980
40°	912	950	991
45°	898	950	1023
50°	879	957	1065
55°	855	977	1127
60°	827	1004	1207
65°	770	1054	1305
70°	707	1104	1427
75°	620	1161	1476
80°	533	1106	1159
85°	466	803	883



TEST NUMBER: P390146

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	3.0
10°-20°	97.4	8.5
20°-30°	148.6	13.0
30°-40°	181.5	15.9
40°-50°	194.0	17.0
50°-60°	187.3	16.4
60°-70°	161.2	14.1
70°-80°	109.1	9.6
80°-90°	28.8	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°	280.0	24.5
0°-40°	461.4	40.4
0°-60°	842.7	73.8
0°-90°	1141.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1141.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	359	359	359	359	359	
5°	355	356	358	358	358	34
15°	342	343	345	347	348	96
25°	318	319	324	326	328	146
35°	281	284	290	296	298	176
45°	236	240	250	262	269	182
55°	182	188	208	229	240	163
65°	121	133	166	192	205	120
75°	60	79	112	134	142	64
85°	15	21	26	27	29	17
90°	0	0	0	0	0	



TEST NUMBER: P390146

CATALOG NUMBER: 22CZ2-20VHE-RDP-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	358.7	358.7	358.7	358.7	358.7
2.5°	356.1	357.0	358.7	358.7	359.5
5°	355.3	356.1	357.8	357.8	357.8
7.5°	352.8	353.6	355.3	356.1	356.1
10°	350.3	351.1	352.8	353.6	354.5
12.5°	346.1	346.9	349.4	351.1	351.1
15°	341.9	342.7	345.2	346.9	347.7
17.5°	336.8	338.5	341.0	342.7	343.5
20°	330.1	331.8	335.1	337.7	338.5
22.5°	324.2	325.9	329.3	331.8	333.5
25°	317.5	319.2	324.2	325.9	327.6
27.5°	309.1	310.8	315.0	318.3	320.9
30°	300.7	302.4	307.4	311.6	313.3
32.5°	291.5	294.0	299.9	303.2	305.7
35°	281.4	283.9	289.8	295.7	298.2
37.5°	271.3	273.8	279.7	287.3	290.6
40°	259.5	262.9	270.5	280.5	282.2
42.5°	248.6	252.8	259.5	271.3	275.5
45°	236.0	240.2	249.5	262.1	268.8
47.5°	224.3	228.5	238.5	253.7	262.1
50°	210.0	215.9	228.5	246.1	254.5
52.5°	196.5	201.6	218.4	237.7	247.8
55°	182.3	188.1	208.3	229.3	240.2
57.5°	169.7	174.7	197.4	220.9	233.5
60°	153.7	160.4	186.5	211.7	224.3
62.5°	136.9	147.0	175.5	201.6	215.0
65°	121.0	132.7	165.5	191.5	204.9
67.5°	106.7	119.3	152.9	180.6	193.2
70°	89.9	105.8	140.3	167.2	181.4
72.5°	74.8	92.4	126.0	152.9	165.5
75°	59.6	79.0	111.7	134.4	142.0
77.5°	46.2	64.7	95.8	102.5	103.3
80°	34.4	51.2	71.4	72.2	74.8
82.5°	23.5	36.1	46.2	50.4	51.2
85°	15.1	21.0	26.0	26.9	28.6
87.5°	6.7	7.6	9.2	8.4	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)