

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: P388202

Luminaire Tested: **22CZ2-20VHE-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: P388202  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20VHE-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1697.7 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

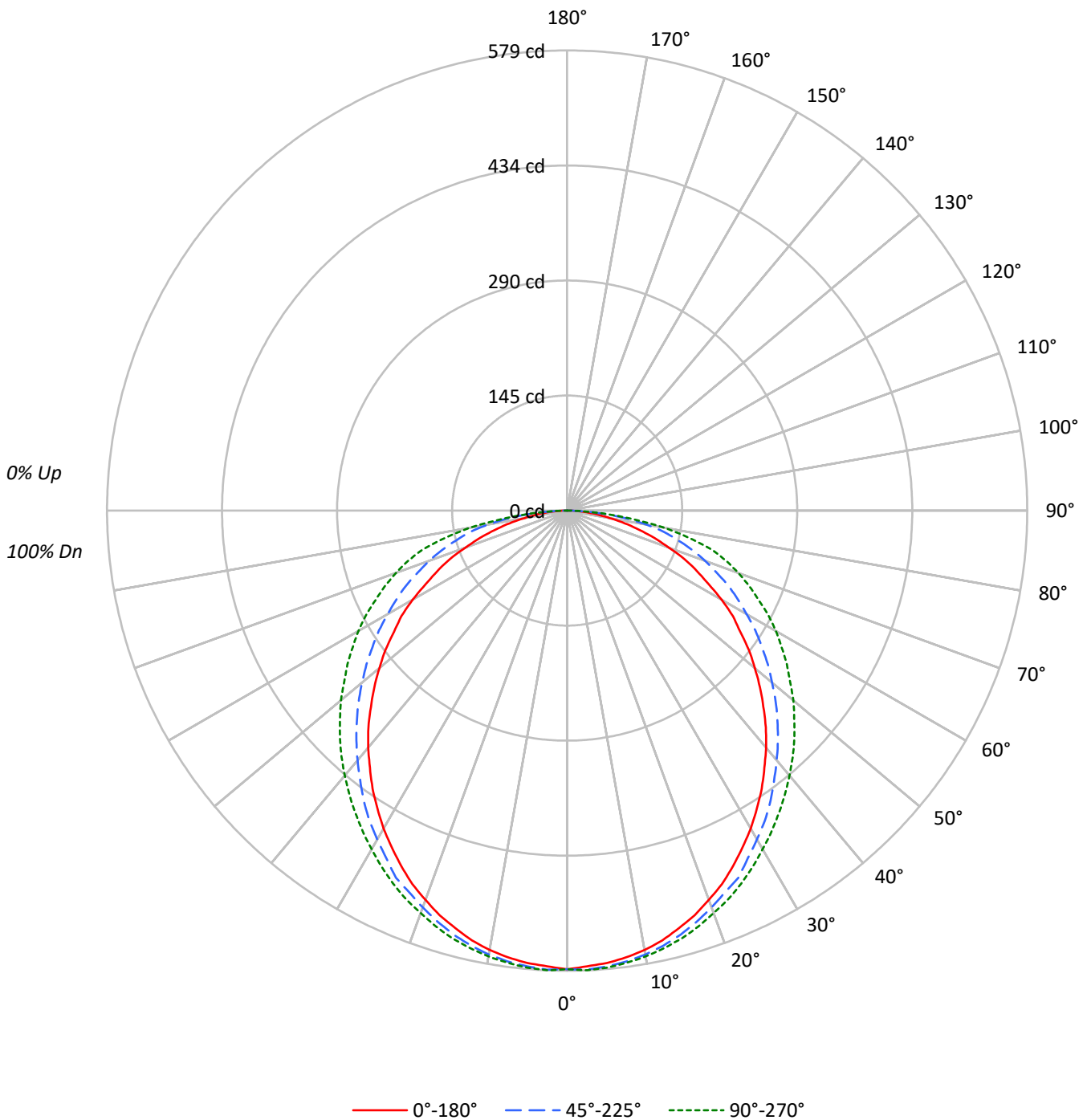
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	1553	1553	1553
5°	1543	1555	1559
10°	1534	1550	1557
15°	1515	1538	1552
20°	1493	1521	1543
25°	1466	1513	1538
30°	1436	1485	1529
35°	1402	1465	1526
40°	1368	1441	1529
45°	1329	1424	1539
50°	1291	1410	1556
55°	1247	1403	1583
60°	1209	1403	1632
65°	1149	1426	1692
70°	1072	1452	1801
75°	981	1502	1945
80°	854	1567	1915
85°	747	1392	1522



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.6	3.2
10°-20°	155.5	9.2
20°-30°	233.4	13.7
30°-40°	278.9	16.4
40°-50°	290.0	17.1
50°-60°	268.8	15.8
60°-70°	220.5	13.0
70°-80°	149.1	8.8
80°-90°	46.8	2.8
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°	443.5	26.1
0°-40°	722.4	42.6
0°-60°	1281.3	75.5
0°-90°	1697.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1697.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	571	572	576	576	577	54
15°	544	546	552	556	557	153
25°	494	498	510	515	518	227
35°	427	433	446	460	464	267
45°	349	356	374	396	404	270
55°	266	274	299	326	338	239
65°	180	190	224	253	266	178
75°	94	110	144	174	187	100
85°	24	33	45	50	49	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	577.2	577.2	577.2	577.2	577.2
2.5°	573.9	575.6	578.1	578.9	578.9
5°	571.4	572.2	575.6	576.4	577.2
7.5°	567.2	568.9	572.2	573.1	573.9
10°	561.4	563.0	567.2	568.9	569.7
12.5°	553.9	555.5	560.5	563.0	563.9
15°	543.8	546.3	552.2	555.5	557.2
17.5°	533.8	536.3	542.2	547.2	548.8
20°	521.3	527.1	531.3	538.0	538.8
22.5°	508.7	512.1	519.6	526.3	529.6
25°	493.7	497.9	509.6	515.4	517.9
27.5°	477.8	483.7	492.9	502.1	505.4
30°	462.0	466.1	477.8	488.7	492.0
32.5°	444.4	450.3	462.8	473.7	478.7
35°	426.9	432.7	446.1	459.5	464.5
37.5°	407.7	414.3	427.7	443.6	450.3
40°	389.3	394.3	410.2	429.4	435.2
42.5°	370.1	375.9	392.6	413.5	420.2
45°	349.2	355.9	374.3	396.0	404.3
47.5°	329.1	335.8	355.9	377.6	387.6
50°	308.3	316.6	336.7	361.7	371.7
52.5°	288.2	295.7	318.3	344.2	353.4
55°	265.7	274.0	299.1	325.8	337.5
57.5°	247.3	253.1	280.7	308.3	320.0
60°	224.7	232.2	260.6	289.9	303.2
62.5°	200.5	213.0	242.3	272.3	285.7
65°	180.4	190.5	223.9	253.1	265.7
67.5°	159.6	170.4	203.0	233.9	248.1
70°	136.2	150.4	184.6	215.5	228.9
72.5°	115.3	130.3	165.4	195.5	209.7
75°	94.4	110.3	144.5	173.8	187.1
77.5°	74.3	91.9	125.3	147.9	156.2
80°	55.1	71.8	101.1	117.0	123.6
82.5°	38.4	52.6	74.3	82.7	84.4
85°	24.2	33.4	45.1	50.1	49.3
87.5°	10.9	13.4	16.7	18.4	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)