

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: P389137

Luminaire Tested: **22CZ2-20VHE-S-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: P389137  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20VHE-S-UNV-L935-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1761.7 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

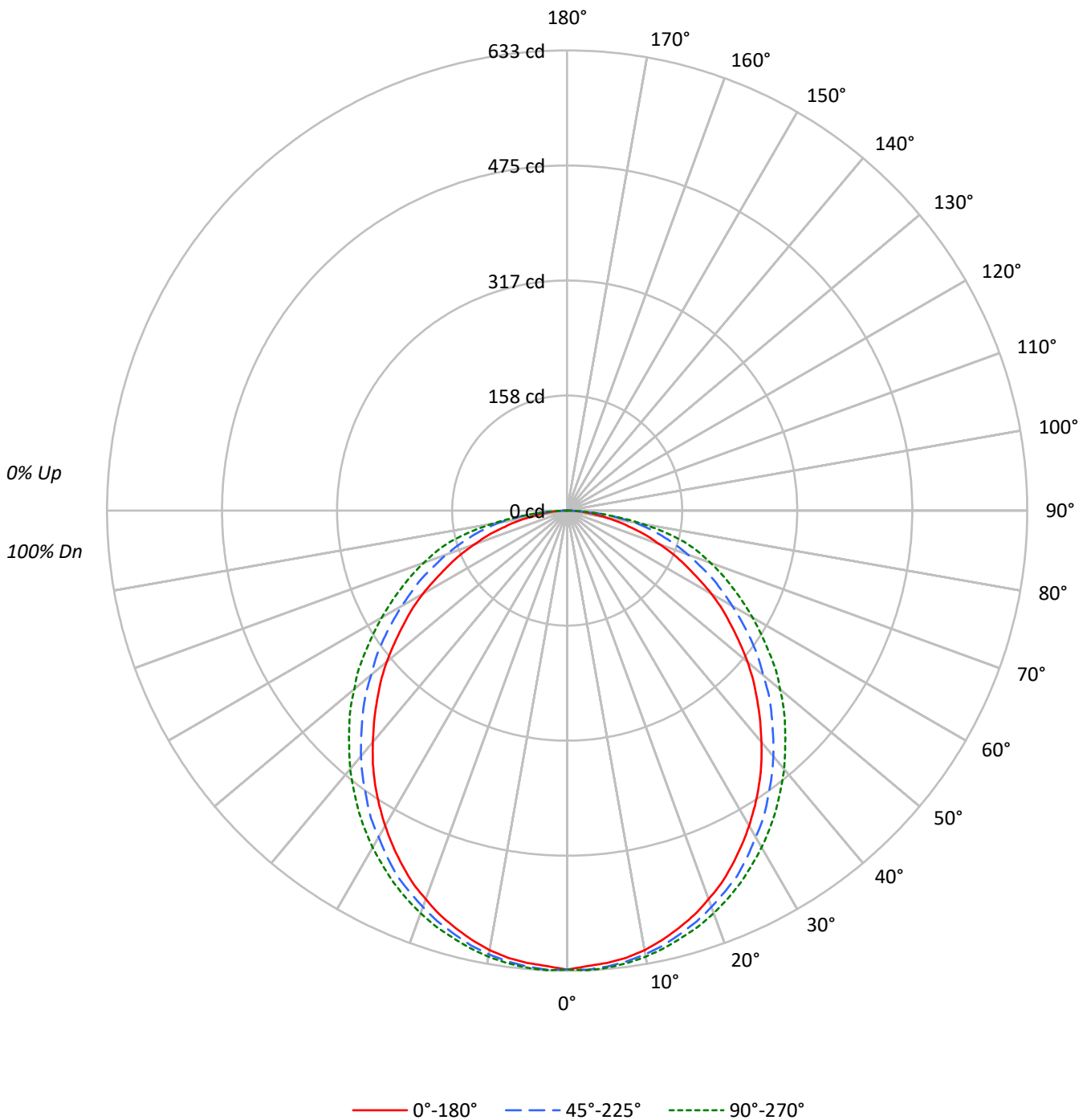
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	1699	1699	1699
5°	1687	1701	1705
10°	1678	1694	1703
15°	1656	1679	1695
20°	1629	1662	1688
25°	1596	1645	1677
30°	1556	1612	1663
35°	1512	1582	1647
40°	1461	1551	1631
45°	1408	1514	1614
50°	1356	1473	1600
55°	1292	1446	1589
60°	1234	1411	1584
65°	1151	1403	1601
70°	1061	1390	1649
75°	958	1410	1735
80°	828	1452	1630
85°	685	1220	1220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.7	3.4
10°-20°	169.9	9.6
20°-30°	254.2	14.4
30°-40°	301.0	17.1
40°-50°	306.8	17.4
50°-60°	275.0	15.6
60°-70°	215.3	12.2
70°-80°	138.8	7.9
80°-90°	41.0	2.3
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°	483.8	27.5
0°-40°	784.8	44.5
0°-60°	1366.6	77.6
0°-90°	1761.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1761.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	631	631	631	631	631	
5°	625	626	630	630	631	59
15°	594	598	602	607	608	168
25°	538	542	554	561	565	247
35°	460	466	482	496	501	288
45°	370	378	398	418	424	286
55°	275	284	308	330	339	247
65°	181	192	220	242	252	180
75°	92	106	136	159	167	99
85°	22	30	40	40	40	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	631.3	631.3	631.3	631.3	631.3
2.5°	627.2	628.8	632.1	632.9	632.9
5°	624.7	626.3	629.6	630.5	631.3
7.5°	620.6	621.4	625.5	627.2	628.0
10°	614.0	615.7	619.8	622.2	623.1
12.5°	605.0	607.4	612.4	615.7	616.5
15°	594.3	597.6	602.5	607.4	608.3
17.5°	582.8	586.1	592.6	598.4	600.0
20°	568.8	572.9	580.3	586.9	589.4
22.5°	554.8	558.1	567.2	575.4	577.8
25°	537.6	542.5	554.0	561.4	564.7
27.5°	519.5	525.2	536.7	546.6	549.9
30°	500.6	506.3	518.7	531.0	535.1
32.5°	480.9	487.4	502.2	514.6	518.7
35°	460.3	466.1	481.7	496.5	501.4
37.5°	438.9	443.9	461.9	477.6	482.5
40°	415.9	422.5	441.4	459.5	464.4
42.5°	392.9	400.3	419.2	438.9	443.9
45°	369.9	378.1	397.8	418.4	424.1
47.5°	347.7	354.3	376.5	396.2	404.4
50°	323.9	330.4	351.8	374.0	382.2
52.5°	299.2	308.2	331.3	352.6	362.5
55°	275.4	284.4	308.2	329.6	338.7
57.5°	253.2	260.6	285.2	307.4	316.5
60°	229.3	235.9	262.2	286.0	294.3
62.5°	203.8	213.7	240.8	263.0	272.9
65°	180.8	191.5	220.3	241.7	251.5
67.5°	159.5	169.3	197.3	220.3	231.0
70°	134.8	148.0	176.7	199.7	209.6
72.5°	115.1	126.6	156.2	179.2	189.9
75°	92.1	106.0	135.6	158.6	166.9
77.5°	73.2	87.1	115.1	133.2	137.3
80°	53.4	67.4	93.7	102.7	105.2
82.5°	36.2	49.3	67.4	69.9	70.7
85°	22.2	30.4	39.5	39.5	39.5
87.5°	10.7	12.3	14.0	13.2	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)