

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: P389138

Luminaire Tested: **22CZ2-20VHE-S-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: P389138
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-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: 1783.9 lumens
Efficiency: N/A
Efficacy: 125.6 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

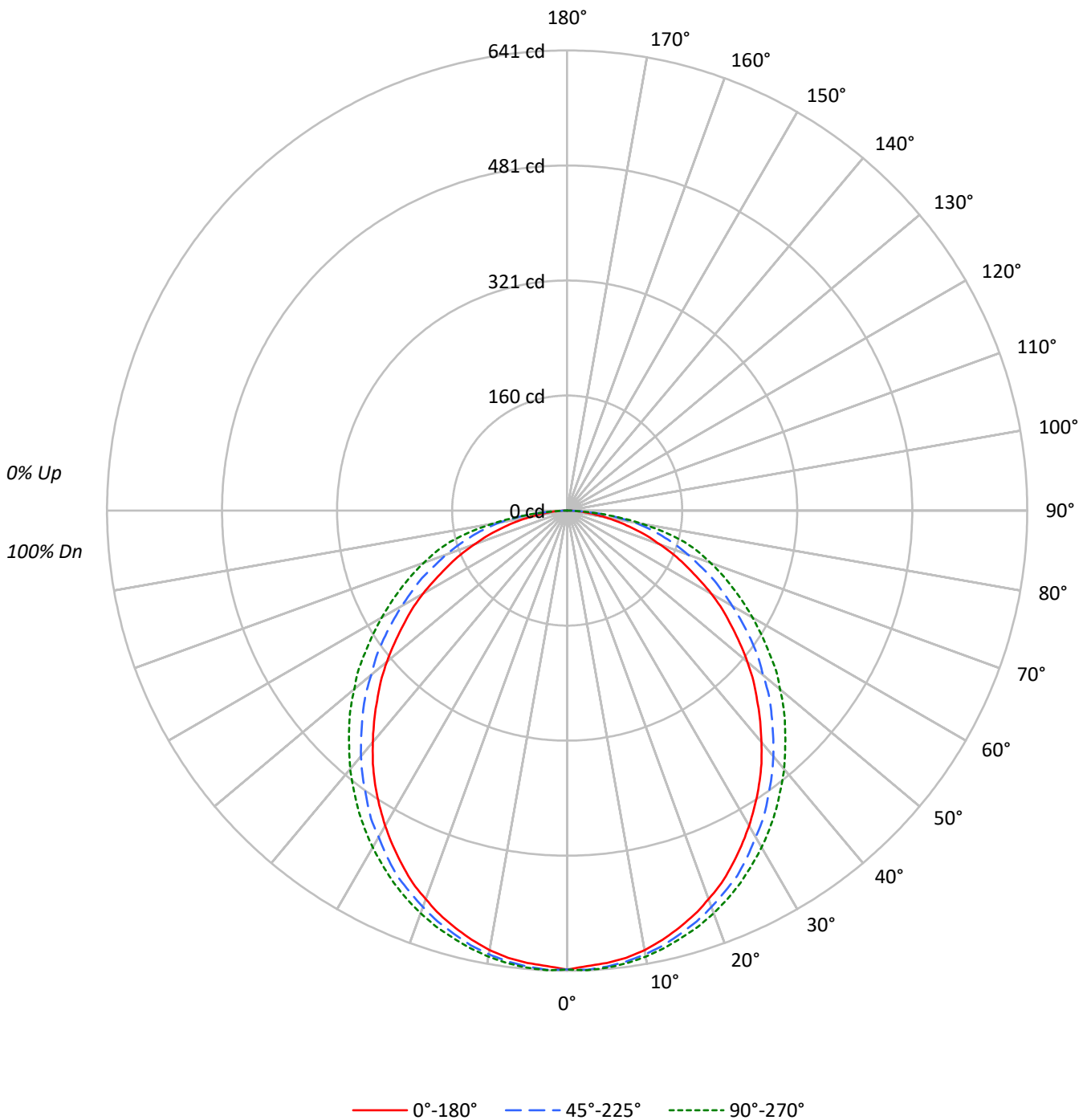
Input Watts (W): 14.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389138

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

Luminous Intensity Polar Plot





TEST NUMBER: P389138

CATALOG NUMBER: 22CZ2-20VHE-S-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	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°	1720	1720	1720
5°	1709	1722	1727
10°	1699	1715	1724
15°	1677	1700	1716
20°	1649	1683	1709
25°	1616	1666	1698
30°	1575	1632	1684
35°	1531	1602	1668
40°	1480	1570	1652
45°	1425	1533	1635
50°	1373	1491	1620
55°	1308	1464	1609
60°	1250	1429	1604
65°	1166	1421	1622
70°	1074	1408	1670
75°	969	1428	1757
80°	838	1471	1650
85°	695	1235	1235



TEST NUMBER: P389138

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	3.4
10°-20°	172.0	9.6
20°-30°	257.4	14.4
30°-40°	304.8	17.1
40°-50°	310.7	17.4
50°-60°	278.4	15.6
60°-70°	218.0	12.2
70°-80°	140.6	7.9
80°-90°	41.5	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°	489.9	27.5
0°-40°	794.7	44.5
0°-60°	1383.8	77.6
0°-90°	1783.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1783.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	633	634	638	638	639	60
15°	602	605	610	615	616	170
25°	544	549	561	568	572	251
35°	466	472	488	503	508	291
45°	374	383	403	424	430	289
55°	279	288	312	334	343	250
65°	183	194	223	245	255	182
75°	93	107	137	161	169	100
85°	22	31	40	40	40	26
90°	0	0	0	0	0	



TEST NUMBER: P389138

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	639.2	639.2	639.2	639.2	639.2
2.5°	635.1	636.7	640.1	640.9	640.9
5°	632.6	634.2	637.6	638.4	639.2
7.5°	628.4	629.2	633.4	635.1	635.9
10°	621.7	623.4	627.6	630.1	630.9
12.5°	612.6	615.1	620.1	623.4	624.2
15°	601.8	605.1	610.1	615.1	615.9
17.5°	590.1	593.4	600.1	605.9	607.6
20°	576.0	580.1	587.6	594.3	596.8
22.5°	561.8	565.1	574.3	582.6	585.1
25°	544.3	549.3	561.0	568.5	571.8
27.5°	526.0	531.9	543.5	553.5	556.8
30°	506.9	512.7	525.2	537.7	541.8
32.5°	486.9	493.6	508.6	521.0	525.2
35°	466.1	471.9	487.7	502.7	507.7
37.5°	444.5	449.5	467.8	483.6	488.6
40°	421.2	427.8	447.0	465.3	470.3
42.5°	397.9	405.3	424.5	444.5	449.5
45°	374.5	382.9	402.8	423.7	429.5
47.5°	352.1	358.7	381.2	401.2	409.5
50°	327.9	334.6	356.2	378.7	387.0
52.5°	303.0	312.1	335.4	357.1	367.1
55°	278.8	288.0	312.1	333.8	342.9
57.5°	256.4	263.8	288.8	311.3	320.4
60°	232.2	238.9	265.5	289.6	298.0
62.5°	206.4	216.4	243.9	266.3	276.3
65°	183.1	193.9	223.1	244.7	254.7
67.5°	161.5	171.5	199.8	223.1	233.9
70°	136.5	149.8	179.0	202.3	212.2
72.5°	116.5	128.2	158.1	181.4	192.3
75°	93.2	107.4	137.3	160.6	169.0
77.5°	74.1	88.2	116.5	134.8	139.0
80°	54.1	68.3	94.9	104.0	106.5
82.5°	36.6	49.9	68.3	70.7	71.6
85°	22.5	30.8	40.0	40.0	40.0
87.5°	10.8	12.5	14.1	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)