

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: P389133

Luminaire Tested: **22CZ2-20VHE-S-UNV-L930-CD1-SDWPD1-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: P389133  
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-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1698.5 lumens  
Efficiency: N/A  
Efficacy: 119.6 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

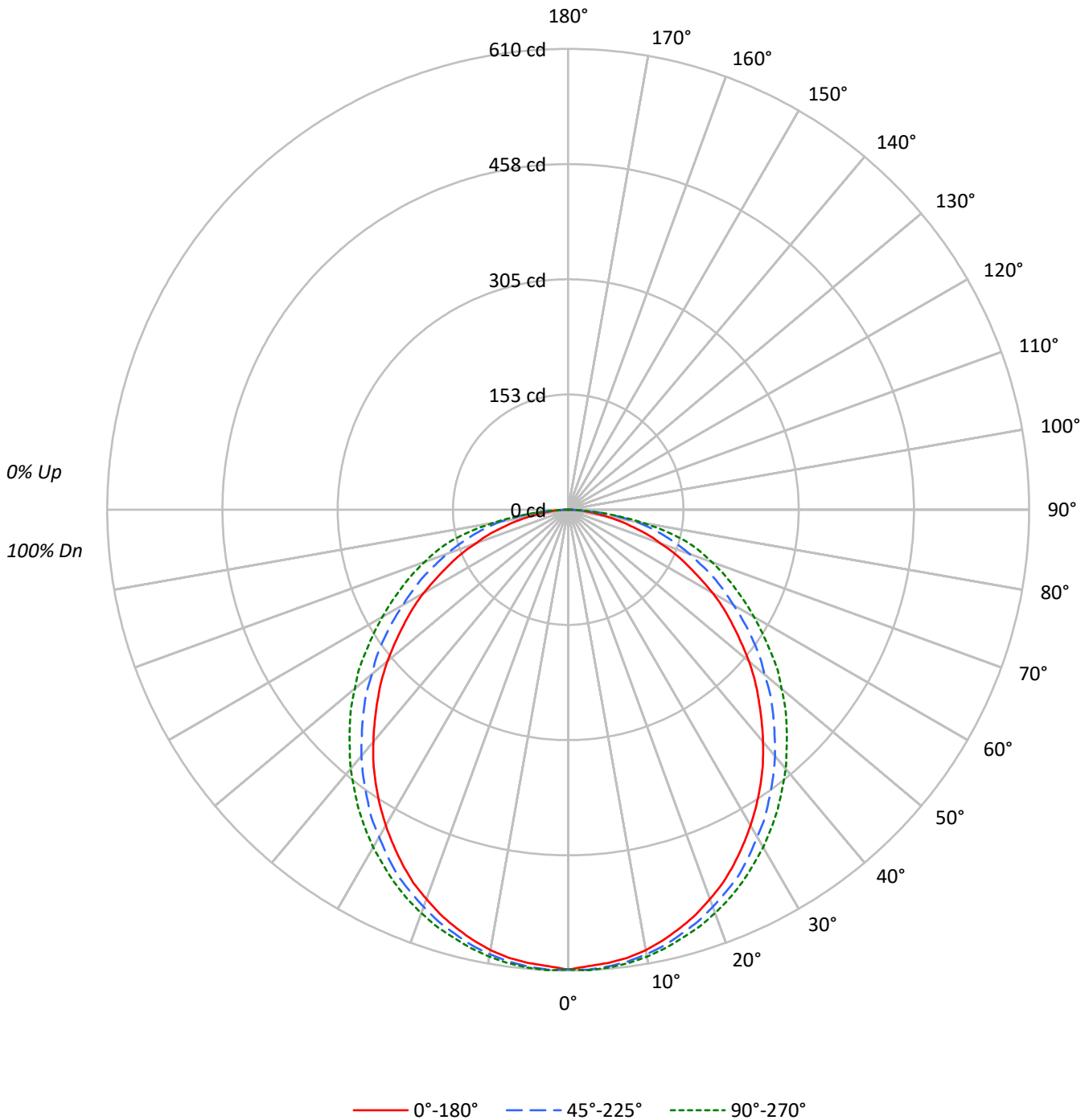
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1638	1638	1638
5°	1627	1640	1644
10°	1618	1633	1641
15°	1596	1618	1634
20°	1570	1602	1627
25°	1539	1586	1616
30°	1500	1554	1603
35°	1458	1526	1588
40°	1409	1495	1573
45°	1357	1460	1556
50°	1307	1420	1543
55°	1246	1394	1532
60°	1190	1361	1527
65°	1110	1352	1544
70°	1023	1341	1590
75°	923	1360	1673
80°	798	1399	1571
85°	661	1173	1173



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.6	3.4
10°-20°	163.8	9.6
20°-30°	245.1	14.4
30°-40°	290.2	17.1
40°-50°	295.8	17.4
50°-60°	265.1	15.6
60°-70°	207.6	12.2
70°-80°	133.8	7.9
80°-90°	39.5	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°	466.4	27.5
0°-40°	756.7	44.5
0°-60°	1317.6	77.6
0°-90°	1698.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1698.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	602	604	607	608	609	57
15°	573	576	581	586	586	162
25°	518	523	534	541	544	239
35°	444	449	464	479	483	277
45°	357	364	384	403	409	275
55°	266	274	297	318	326	238
65°	174	185	212	233	242	173
75°	89	102	131	153	161	95
85°	21	29	38	38	38	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	608.6	608.6	608.6	608.6	608.6
2.5°	604.7	606.2	609.4	610.2	610.2
5°	602.3	603.9	607.0	607.8	608.6
7.5°	598.3	599.1	603.1	604.7	605.5
10°	592.0	593.6	597.5	599.9	600.7
12.5°	583.3	585.6	590.4	593.6	594.4
15°	573.0	576.1	580.9	585.6	586.4
17.5°	561.9	565.0	571.4	576.9	578.5
20°	548.4	552.4	559.5	565.8	568.2
22.5°	534.9	538.1	546.8	554.7	557.1
25°	518.3	523.0	534.1	541.3	544.4
27.5°	500.8	506.4	517.5	527.0	530.2
30°	482.6	488.2	500.1	511.9	515.9
32.5°	463.6	469.9	484.2	496.1	500.1
35°	443.8	449.3	464.4	478.7	483.4
37.5°	423.2	427.9	445.4	460.4	465.2
40°	401.0	407.3	425.6	443.0	447.8
42.5°	378.8	385.9	404.2	423.2	427.9
45°	356.6	364.5	383.6	403.4	408.9
47.5°	335.2	341.6	363.0	382.0	389.9
50°	312.2	318.6	339.2	360.6	368.5
52.5°	288.5	297.2	319.4	340.0	349.5
55°	265.5	274.2	297.2	317.8	326.5
57.5°	244.1	251.2	275.0	296.4	305.1
60°	221.1	227.4	252.8	275.8	283.7
62.5°	196.5	206.0	232.2	253.6	263.1
65°	174.3	184.6	212.4	233.0	242.5
67.5°	153.7	163.3	190.2	212.4	222.7
70°	130.0	142.6	170.4	192.6	202.1
72.5°	110.9	122.0	150.6	172.8	183.1
75°	88.8	102.2	130.8	152.9	160.9
77.5°	70.5	84.0	110.9	128.4	132.3
80°	51.5	65.0	90.3	99.1	101.4
82.5°	34.9	47.5	65.0	67.4	68.2
85°	21.4	29.3	38.0	38.0	38.0
87.5°	10.3	11.9	13.5	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)