

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: P387650

Luminaire Tested: **22CZ2-20-SQR-UNV-L930-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: P387650  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20-SQR-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

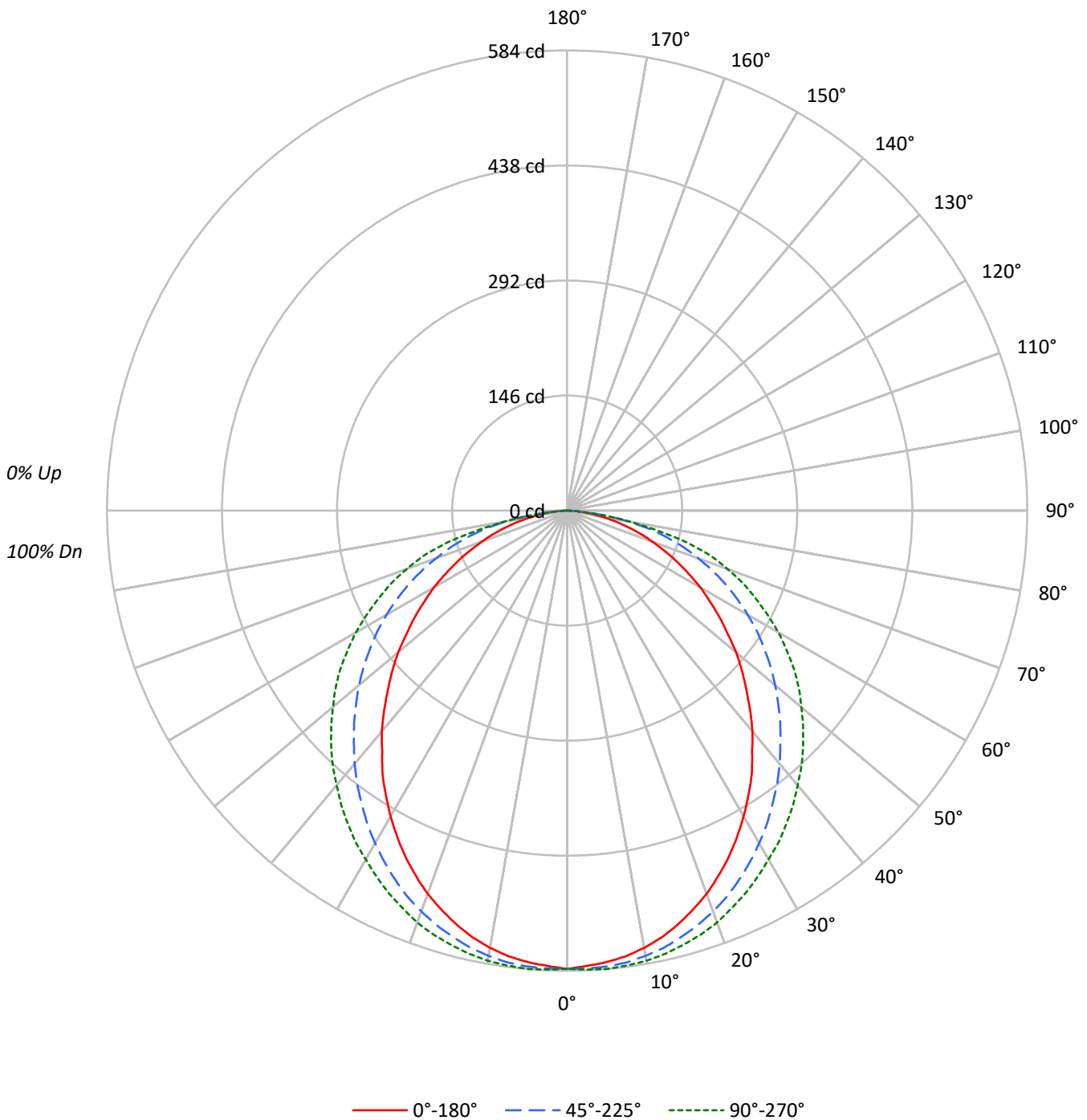
Lumens per Lamp: N/A  
Luminaire Lumens: 1664.8 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.9  
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1565	1565	1565
5°	1554	1569	1577
10°	1539	1568	1585
15°	1514	1561	1589
20°	1482	1550	1593
25°	1441	1534	1591
30°	1392	1515	1588
35°	1342	1492	1594
40°	1285	1474	1599
45°	1224	1455	1612
50°	1171	1442	1624
55°	1109	1431	1650
60°	1051	1425	1667
65°	981	1414	1680
70°	902	1393	1703
75°	813	1356	1643
80°	697	1199	1237
85°	562	707	562



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	3.3
10°-20°	157.6	9.5
20°-30°	236.7	14.2
30°-40°	282.3	17.0
40°-50°	291.9	17.5
50°-60°	268.4	16.1
60°-70°	213.7	12.8
70°-80°	130.5	7.8
80°-90°	28.4	1.7
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°	449.5	27.0
0°-40°	731.9	44.0
0°-60°	1292.2	77.6
0°-90°	1664.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1664.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	575	577	581	583	584	55
15°	544	550	560	568	570	153
25°	485	497	517	531	536	223
35°	408	426	454	478	485	255
45°	322	344	382	413	424	249
55°	236	262	305	340	352	211
65°	154	180	222	253	264	153
75°	78	101	130	153	158	83
85°	18	22	23	20	18	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	581.6	581.6	581.6	581.6	581.6
2.5°	578.4	579.2	581.6	583.1	583.1
5°	575.2	576.8	580.8	583.1	583.9
7.5°	570.5	572.9	578.4	581.6	582.3
10°	563.4	566.5	573.7	578.4	580.0
12.5°	554.7	559.4	568.1	574.4	576.0
15°	543.6	549.9	560.2	568.1	570.5
17.5°	531.0	538.9	551.5	561.0	564.2
20°	517.6	525.5	541.3	552.3	556.3
22.5°	501.7	512.0	530.2	542.8	546.0
25°	485.2	497.0	516.8	531.0	535.7
27.5°	467.0	481.2	502.5	519.9	523.9
30°	448.0	463.0	487.5	506.5	511.2
32.5°	428.3	445.6	471.7	493.1	499.4
35°	408.5	425.9	454.3	478.0	485.2
37.5°	385.6	406.1	437.7	462.2	470.9
40°	365.8	385.6	419.6	446.4	455.1
42.5°	343.7	365.1	400.6	429.8	440.1
45°	321.6	344.5	382.4	413.3	423.5
47.5°	301.0	324.0	363.5	395.9	406.1
50°	279.7	303.4	344.5	377.7	388.0
52.5°	256.8	282.9	325.5	358.7	370.6
55°	236.3	262.3	305.0	339.8	351.6
57.5°	214.9	241.8	286.0	319.2	330.3
60°	195.2	221.2	264.7	297.1	309.7
62.5°	173.8	200.7	243.4	275.0	286.8
65°	154.1	180.2	222.0	252.8	263.9
67.5°	134.3	160.4	199.9	229.1	241.8
70°	114.6	140.6	177.0	205.4	216.5
72.5°	97.2	120.1	154.9	180.9	191.2
75°	78.2	101.1	130.4	153.3	158.0
77.5°	60.8	81.4	105.9	116.2	117.7
80°	45.0	60.8	77.4	79.8	79.8
82.5°	30.0	41.9	48.2	49.0	48.2
85°	18.2	22.1	22.9	19.8	18.2
87.5°	6.3	6.3	4.0	2.4	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)