

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: P387654

Luminaire Tested: **22CZ2-20-SQR-UNV-L940-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: P387654  
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-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1681.7 lumens  
Efficiency: N/A  
Efficacy: 93.9 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

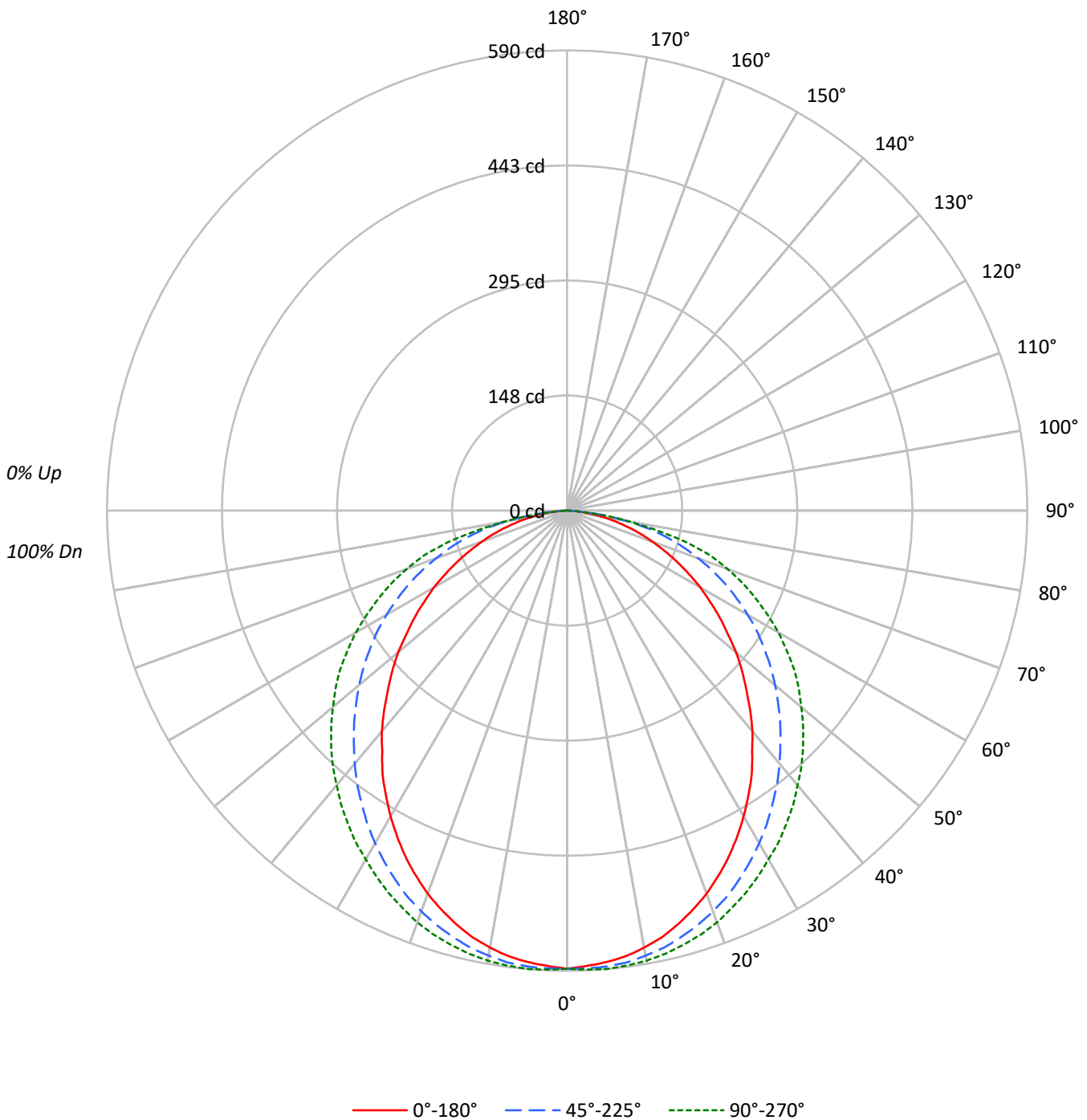
Input Watts (W): 17.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1581	1581	1581
5°	1570	1585	1593
10°	1555	1583	1601
15°	1530	1577	1606
20°	1497	1566	1609
25°	1455	1550	1607
30°	1406	1530	1605
35°	1356	1508	1610
40°	1298	1489	1615
45°	1236	1470	1628
50°	1183	1457	1641
55°	1120	1445	1666
60°	1061	1439	1684
65°	991	1428	1698
70°	910	1407	1721
75°	821	1369	1659
80°	705	1212	1249
85°	568	713	568



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	3.3
10°-20°	159.2	9.5
20°-30°	239.2	14.2
30°-40°	285.2	17.0
40°-50°	294.9	17.5
50°-60°	271.1	16.1
60°-70°	215.8	12.8
70°-80°	131.9	7.8
80°-90°	28.7	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°	454.1	27.0
0°-40°	739.3	44.0
0°-60°	1305.3	77.6
0°-90°	1681.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1681.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	581	583	587	589	590	55
15°	549	556	566	574	576	155
25°	490	502	522	536	541	225
35°	413	430	459	483	490	257
45°	325	348	386	417	428	251
55°	239	265	308	343	355	213
65°	156	182	224	255	267	154
75°	79	102	132	155	160	84
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°	587.5	587.5	587.5	587.5	587.5
2.5°	584.3	585.1	587.5	589.1	589.1
5°	581.1	582.7	586.7	589.1	589.9
7.5°	576.3	578.7	584.3	587.5	588.3
10°	569.1	572.3	579.5	584.3	585.9
12.5°	560.3	565.1	573.9	580.3	581.9
15°	549.1	555.5	565.9	573.9	576.3
17.5°	536.4	544.4	557.1	566.7	569.9
20°	522.8	530.8	546.8	557.9	561.9
22.5°	506.8	517.2	535.6	548.3	551.5
25°	490.1	502.1	522.0	536.4	541.2
27.5°	471.7	486.1	507.6	525.2	529.2
30°	452.6	467.7	492.5	511.6	516.4
32.5°	432.6	450.2	476.5	498.1	504.4
35°	412.7	430.2	459.0	482.9	490.1
37.5°	389.5	410.3	442.2	466.9	475.7
40°	369.6	389.5	423.8	451.0	459.7
42.5°	347.2	368.8	404.7	434.2	444.6
45°	324.9	348.0	386.3	417.4	427.8
47.5°	304.1	327.3	367.2	399.9	410.3
50°	282.6	306.5	348.0	381.5	391.9
52.5°	259.4	285.7	328.8	362.4	374.3
55°	238.7	265.0	308.1	343.2	355.2
57.5°	217.1	244.2	288.9	322.5	333.6
60°	197.1	223.5	267.4	300.1	312.9
62.5°	175.6	202.7	245.8	277.8	289.7
65°	155.6	182.0	224.3	255.4	266.6
67.5°	135.7	162.0	201.9	231.5	244.2
70°	115.7	142.1	178.8	207.5	218.7
72.5°	98.2	121.3	156.4	182.8	193.2
75°	79.0	102.2	131.7	154.8	159.6
77.5°	61.5	82.2	107.0	117.3	118.9
80°	45.5	61.5	78.2	80.6	80.6
82.5°	30.3	42.3	48.7	49.5	48.7
85°	18.4	22.3	23.1	20.0	18.4
87.5°	6.4	6.4	4.0	2.4	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)