

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: P387653

Luminaire Tested: **22CZ2-20-SQR-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: P387653  
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-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

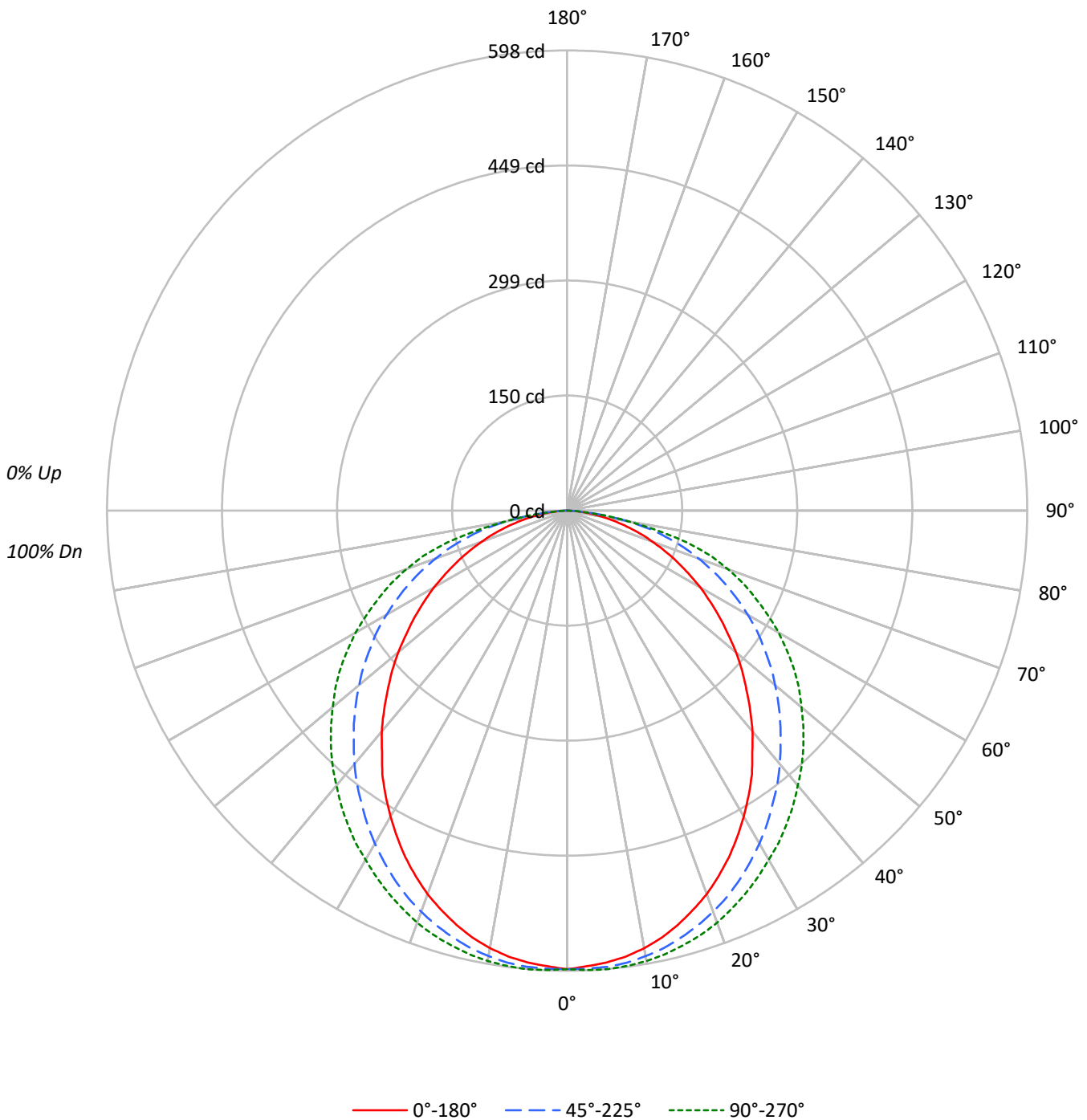
Lumens per Lamp: N/A  
Luminaire Lumens: 1706.0 lumens  
Efficiency: N/A  
Efficacy: 95.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	1604	1604	1604
5°	1592	1608	1616
10°	1577	1606	1624
15°	1552	1599	1629
20°	1519	1588	1632
25°	1476	1572	1630
30°	1427	1552	1628
35°	1375	1530	1633
40°	1317	1511	1638
45°	1254	1491	1652
50°	1200	1478	1665
55°	1136	1466	1690
60°	1076	1460	1708
65°	1005	1449	1722
70°	924	1427	1746
75°	834	1389	1683
80°	716	1230	1268
85°	574	726	574



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.5	3.3
10°-20°	161.5	9.5
20°-30°	242.6	14.2
30°-40°	289.4	17.0
40°-50°	299.2	17.5
50°-60°	275.0	16.1
60°-70°	219.0	12.8
70°-80°	133.8	7.8
80°-90°	29.1	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°	460.6	27.0
0°-40°	750.0	44.0
0°-60°	1324.2	77.6
0°-90°	1706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1706.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	590	591	595	598	598	56
15°	557	564	574	582	585	157
25°	497	509	530	544	549	229
35°	419	436	466	490	497	261
45°	330	353	392	424	434	255
55°	242	269	312	348	360	217
65°	158	185	228	259	270	156
75°	80	104	134	157	162	85
85°	19	23	24	20	19	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	595.9	595.9	595.9	595.9	595.9
2.5°	592.7	593.5	595.9	597.6	597.6
5°	589.5	591.1	595.1	597.6	598.4
7.5°	584.6	587.0	592.7	595.9	596.8
10°	577.3	580.6	587.8	592.7	594.3
12.5°	568.4	573.3	582.2	588.7	590.3
15°	557.1	563.6	574.1	582.2	584.6
17.5°	544.1	552.2	565.2	574.9	578.1
20°	530.4	538.5	554.7	566.0	570.0
22.5°	514.2	524.7	543.3	556.3	559.5
25°	497.2	509.3	529.6	544.1	549.0
27.5°	478.5	493.1	515.0	532.8	536.8
30°	459.1	474.5	499.6	519.0	523.9
32.5°	438.9	456.7	483.4	505.3	511.7
35°	418.6	436.4	465.6	489.9	497.2
37.5°	395.1	416.2	448.6	473.7	482.6
40°	374.9	395.1	430.0	457.5	466.4
42.5°	352.2	374.1	410.5	440.5	451.0
45°	329.6	353.0	391.9	423.5	434.0
47.5°	308.5	332.0	372.5	405.7	416.2
50°	286.6	310.9	353.0	387.0	397.6
52.5°	263.2	289.9	333.6	367.6	379.8
55°	242.1	268.8	312.5	348.2	360.3
57.5°	220.2	247.8	293.1	327.1	338.5
60°	200.0	226.7	271.3	304.5	317.4
62.5°	178.1	205.7	249.4	281.8	293.9
65°	157.9	184.6	227.5	259.1	270.4
67.5°	137.7	164.4	204.9	234.8	247.8
70°	117.4	144.1	181.4	210.5	221.9
72.5°	99.6	123.1	158.7	185.4	195.9
75°	80.2	103.6	133.6	157.1	161.9
77.5°	62.3	83.4	108.5	119.0	120.6
80°	46.2	62.3	79.4	81.8	81.8
82.5°	30.8	42.9	49.4	50.2	49.4
85°	18.6	22.7	23.5	20.2	18.6
87.5°	6.5	6.5	4.0	2.4	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)