

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: P387749

Luminaire Tested: **22CZ2-24HE-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: P387749  
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: 22CZ2-24HE-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: 1961.8 lumens  
Efficiency: N/A  
Efficacy: 102.2 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

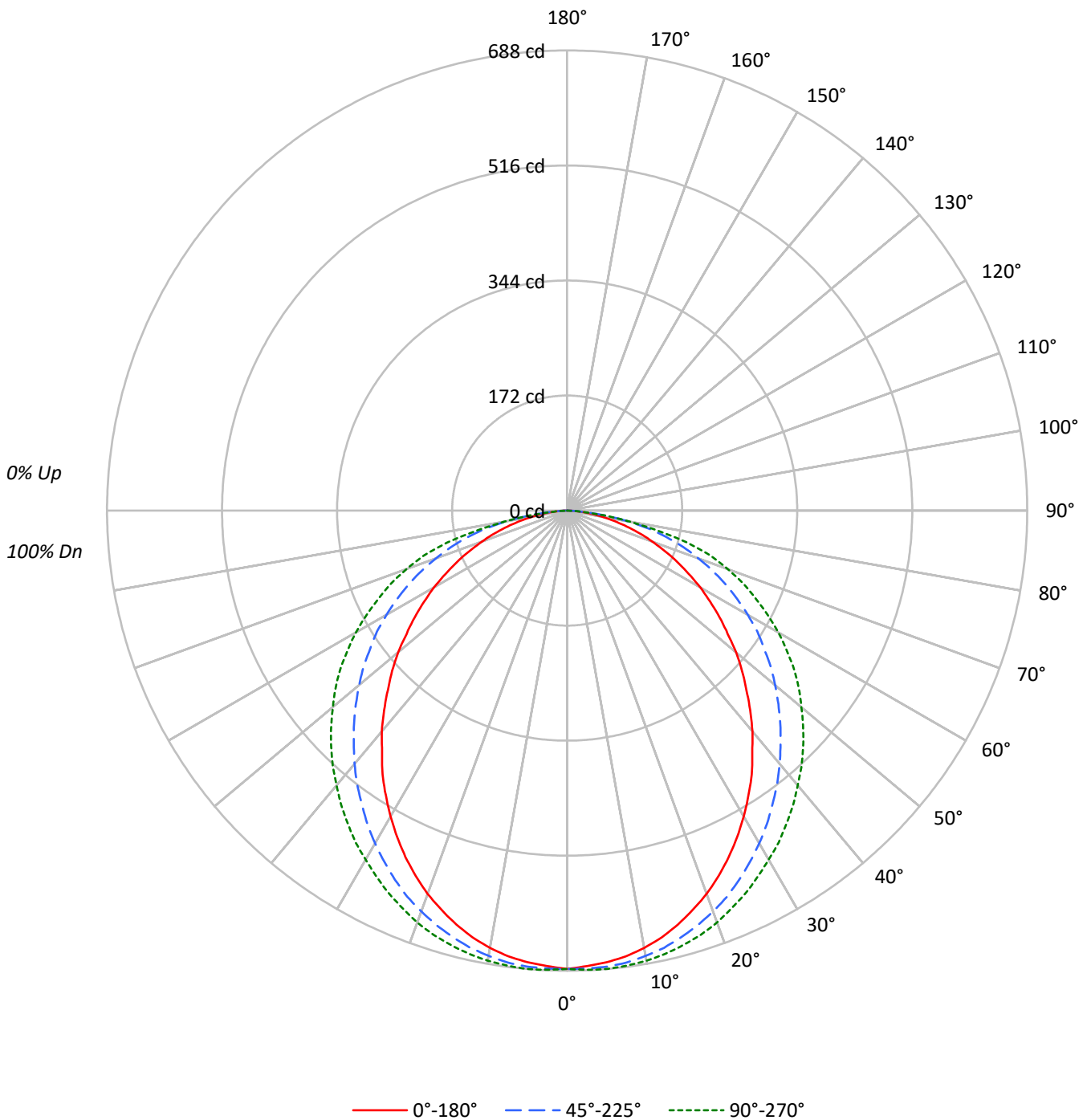
Input Watts (W): 19.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1844	1844	1844
5°	1831	1849	1859
10°	1814	1847	1867
15°	1785	1839	1873
20°	1747	1826	1877
25°	1697	1808	1874
30°	1640	1785	1872
35°	1581	1759	1878
40°	1514	1737	1884
45°	1442	1715	1899
50°	1380	1700	1914
55°	1306	1686	1944
60°	1238	1679	1964
65°	1156	1666	1980
70°	1062	1641	2007
75°	959	1597	1936
80°	823	1413	1457
85°	661	834	661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.0	3.3
10°-20°	185.8	9.5
20°-30°	279.0	14.2
30°-40°	332.7	17.0
40°-50°	344.0	17.5
50°-60°	316.3	16.1
60°-70°	251.8	12.8
70°-80°	153.8	7.8
80°-90°	33.4	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°	529.7	27.0
0°-40°	862.4	44.0
0°-60°	1522.7	77.6
0°-90°	1961.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1961.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	678	680	684	687	688	64
15°	641	648	660	670	672	180
25°	572	586	609	626	631	263
35°	481	502	535	563	572	300
45°	379	406	451	487	499	293
55°	278	309	359	400	414	249
65°	182	212	262	298	311	180
75°	92	119	154	181	186	98
85°	21	26	27	23	21	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	685.3	685.3	685.3	685.3	685.3
2.5°	681.6	682.5	685.3	687.2	687.2
5°	677.9	679.7	684.4	687.2	688.1
7.5°	672.3	675.1	681.6	685.3	686.2
10°	663.9	667.6	676.0	681.6	683.4
12.5°	653.6	659.2	669.5	676.9	678.8
15°	640.6	648.1	660.2	669.5	672.3
17.5°	625.7	635.0	649.9	661.1	664.8
20°	609.9	619.2	637.8	650.9	655.5
22.5°	591.3	603.4	624.8	639.7	643.4
25°	571.7	585.7	609.0	625.7	631.3
27.5°	550.3	567.1	592.2	612.7	617.3
30°	527.9	545.6	574.5	596.8	602.4
32.5°	504.7	525.2	555.9	581.0	588.5
35°	481.4	501.9	535.4	563.3	571.7
37.5°	454.4	478.6	515.8	544.7	554.9
40°	431.1	454.4	494.4	526.1	536.3
42.5°	405.0	430.2	472.1	506.5	518.6
45°	379.0	406.0	450.7	487.0	499.1
47.5°	354.8	381.8	428.3	466.5	478.6
50°	329.6	357.5	406.0	445.1	457.2
52.5°	302.6	333.3	383.6	422.7	436.7
55°	278.4	309.1	359.4	400.4	414.3
57.5°	253.3	284.9	337.1	376.2	389.2
60°	230.0	260.7	311.9	350.1	365.0
62.5°	204.8	236.5	286.8	324.0	338.0
65°	181.6	212.3	261.6	298.0	311.0
67.5°	158.3	189.0	235.6	270.0	284.9
70°	135.0	165.7	208.6	242.1	255.1
72.5°	114.5	141.5	182.5	213.2	225.3
75°	92.2	119.2	153.6	180.6	186.2
77.5°	71.7	95.9	124.8	136.9	138.7
80°	53.1	71.7	91.2	94.0	94.0
82.5°	35.4	49.3	56.8	57.7	56.8
85°	21.4	26.1	27.0	23.3	21.4
87.5°	7.4	7.4	4.7	2.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)