

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: P387775

Luminaire Tested: **22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-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: P387775  
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: 22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-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: 2026.3 lumens  
Efficiency: N/A  
Efficacy: 115.8 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

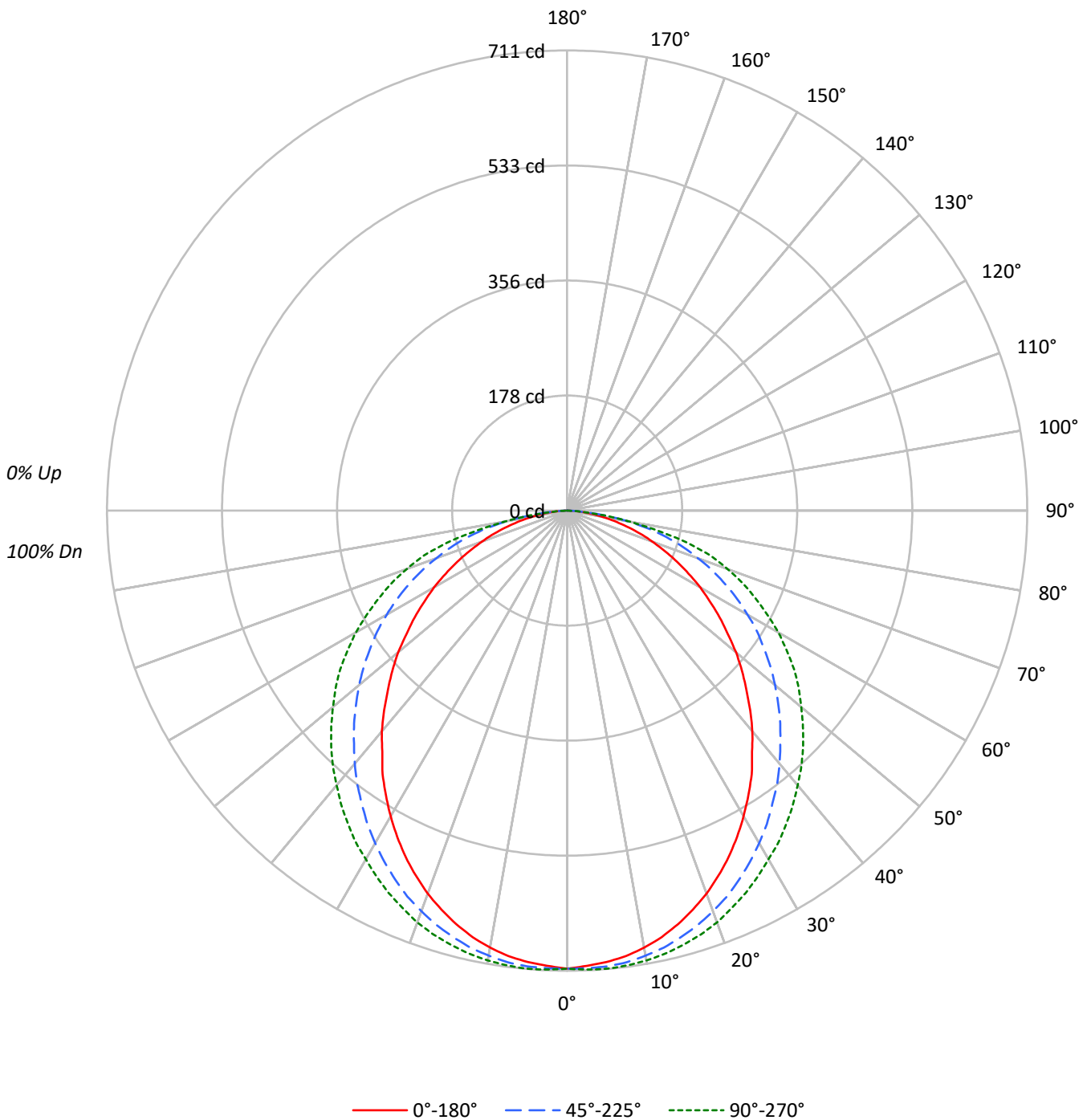
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P387775

CATALOG NUMBER: 22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P387775

CATALOG NUMBER: 22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-U

**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°	1905	1905	1905
5°	1891	1910	1920
10°	1874	1908	1929
15°	1843	1900	1935
20°	1804	1887	1939
25°	1753	1868	1936
30°	1694	1844	1933
35°	1633	1817	1940
40°	1564	1794	1946
45°	1490	1772	1962
50°	1425	1755	1977
55°	1349	1742	2008
60°	1278	1734	2029
65°	1194	1720	2045
70°	1098	1695	2073
75°	990	1650	1999
80°	849	1460	1505
85°	682	861	682



TEST NUMBER: P387775

CATALOG NUMBER: 22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.1	3.3
10°-20°	191.9	9.5
20°-30°	288.2	14.2
30°-40°	343.7	17.0
40°-50°	355.3	17.5
50°-60°	326.7	16.1
60°-70°	260.1	12.8
70°-80°	158.9	7.8
80°-90°	34.5	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°	547.1	27.0
0°-40°	890.8	44.0
0°-60°	1572.8	77.6
0°-90°	2026.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2026.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	700	702	707	710	711	66
15°	662	669	682	692	694	186
25°	590	605	629	646	652	272
35°	497	518	553	582	590	310
45°	391	419	466	503	516	303
55°	288	319	371	414	428	257
65°	188	219	270	308	321	186
75°	95	123	159	187	192	101
85°	22	27	28	24	22	25
90°	0	0	0	0	0	



TEST NUMBER: P387775

CATALOG NUMBER: 22CZ2-24VHE-SQR-UNV-L940-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	707.8	707.8	707.8	707.8	707.8
2.5°	704.0	705.0	707.8	709.8	709.8
5°	700.1	702.1	706.9	709.8	710.7
7.5°	694.4	697.3	704.0	707.8	708.8
10°	685.7	689.6	698.2	704.0	705.9
12.5°	675.1	680.9	691.5	699.2	701.1
15°	661.7	669.4	681.9	691.5	694.4
17.5°	646.3	655.9	671.3	682.8	686.7
20°	629.9	639.6	658.8	672.3	677.1
22.5°	610.7	623.2	645.3	660.7	664.6
25°	590.5	604.9	629.0	646.3	652.1
27.5°	568.4	585.7	611.7	632.8	637.6
30°	545.3	563.6	593.4	616.5	622.2
32.5°	521.3	542.4	574.2	600.1	607.8
35°	497.2	518.4	553.0	581.8	590.5
37.5°	469.3	494.3	532.8	562.6	573.2
40°	445.3	469.3	510.7	543.4	554.0
42.5°	418.4	444.3	487.6	523.2	535.7
45°	391.4	419.3	465.5	503.0	515.5
47.5°	366.4	394.3	442.4	481.8	494.3
50°	340.5	369.3	419.3	459.7	472.2
52.5°	312.6	344.3	396.2	436.6	451.1
55°	287.6	319.3	371.2	413.5	428.0
57.5°	261.6	294.3	348.1	388.5	402.0
60°	237.5	269.3	322.2	361.6	377.0
62.5°	211.6	244.3	296.2	334.7	349.1
65°	187.5	219.3	270.2	307.8	321.2
67.5°	163.5	195.2	243.3	278.9	294.3
70°	139.5	171.2	215.4	250.1	263.5
72.5°	118.3	146.2	188.5	220.2	232.7
75°	95.2	123.1	158.7	186.6	192.3
77.5°	74.1	99.1	128.9	141.4	143.3
80°	54.8	74.1	94.2	97.1	97.1
82.5°	36.5	51.0	58.7	59.6	58.7
85°	22.1	26.9	27.9	24.0	22.1
87.5°	7.7	7.7	4.8	2.9	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)