

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: P388136

Luminaire Tested: **22CZ2-65VHE-SQR-UNV-L940-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: P388136  
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: 22CZ2-65VHE-SQR-UNV-L940-CD1-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: 5380.9 lumens  
Efficiency: N/A  
Efficacy: 112.3 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

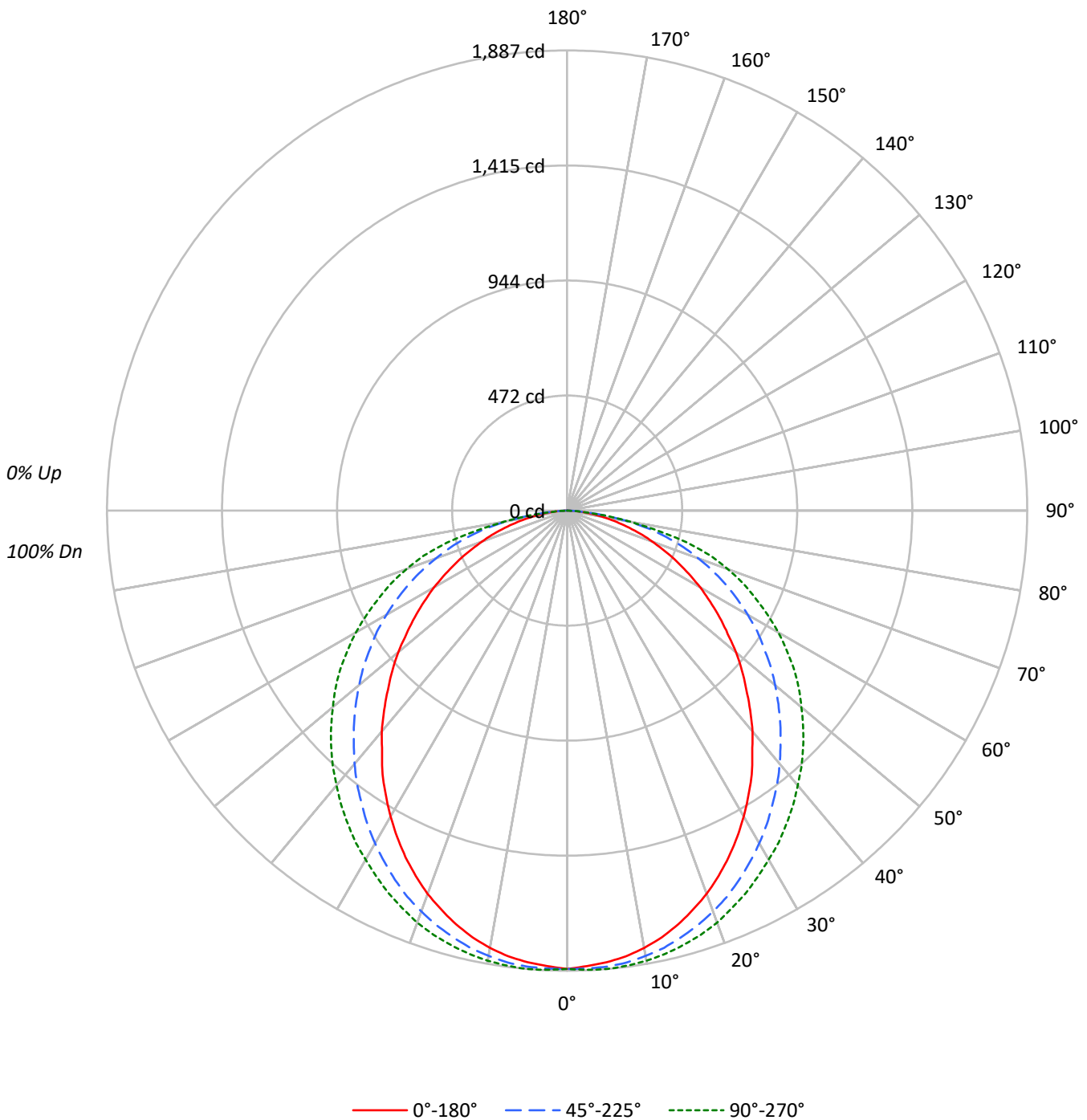
Input Watts (W): 47.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	5058	5058	5058
5°	5022	5071	5098
10°	4976	5066	5122
15°	4895	5044	5137
20°	4790	5010	5149
25°	4656	4959	5141
30°	4500	4896	5134
35°	4338	4824	5151
40°	4154	4764	5168
45°	3956	4704	5210
50°	3785	4662	5250
55°	3582	4625	5332
60°	3395	4605	5388
65°	3171	4569	5431
70°	2913	4501	5506
75°	2628	4381	5311
80°	2256	3879	3997
85°	1812	2288	1812



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.2	3.3
10°-20°	509.5	9.5
20°-30°	765.2	14.2
30°-40°	912.6	17.0
40°-50°	943.6	17.5
50°-60°	867.5	16.1
60°-70°	690.6	12.8
70°-80°	421.9	7.8
80°-90°	91.7	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°	1452.9	27.0
0°-40°	2365.5	44.0
0°-60°	4176.6	77.6
0°-90°	5380.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5380.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1880	1880	1880	1880	1880	
5°	1859	1864	1877	1885	1887	176
15°	1757	1778	1811	1836	1844	495
25°	1568	1606	1670	1716	1732	721
35°	1320	1377	1468	1545	1568	824
45°	1039	1114	1236	1336	1369	804
55°	764	848	986	1098	1136	683
65°	498	582	718	817	853	493
75°	253	327	421	496	511	269
85°	59	72	74	64	59	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1879.7	1879.7	1879.7	1879.7	1879.7
2.5°	1869.5	1872.0	1879.7	1884.8	1884.8
5°	1859.2	1864.4	1877.1	1884.8	1887.3
7.5°	1843.9	1851.6	1869.5	1879.7	1882.2
10°	1820.9	1831.2	1854.1	1869.5	1874.6
12.5°	1792.8	1808.2	1836.3	1856.7	1861.8
15°	1757.1	1777.5	1810.7	1836.3	1843.9
17.5°	1716.2	1741.8	1782.6	1813.3	1823.5
20°	1672.8	1698.4	1749.4	1785.2	1798.0
22.5°	1621.7	1654.9	1713.7	1754.5	1764.8
25°	1568.1	1606.4	1670.3	1716.2	1731.6
27.5°	1509.4	1555.3	1624.3	1680.5	1693.2
30°	1448.1	1496.6	1575.8	1637.1	1652.4
32.5°	1384.2	1440.4	1524.7	1593.6	1614.1
35°	1320.4	1376.6	1468.5	1545.1	1568.1
37.5°	1246.3	1312.7	1414.9	1494.0	1522.1
40°	1182.5	1246.3	1356.1	1443.0	1471.1
42.5°	1111.0	1179.9	1294.8	1389.3	1422.5
45°	1039.4	1113.5	1236.1	1335.7	1368.9
47.5°	973.0	1047.1	1174.8	1279.5	1312.7
50°	904.1	980.7	1113.5	1220.8	1254.0
52.5°	830.0	914.3	1052.2	1159.5	1197.8
55°	763.6	847.9	985.8	1098.2	1136.5
57.5°	694.7	781.5	924.5	1031.8	1067.5
60°	630.8	715.1	855.6	960.3	1001.1
62.5°	561.9	648.7	786.6	888.8	927.1
65°	498.0	582.3	717.6	817.3	853.0
67.5°	434.2	518.4	646.1	740.6	781.5
70°	370.3	454.6	572.1	664.0	699.8
72.5°	314.1	388.2	500.6	584.8	618.0
75°	252.8	326.9	421.4	495.5	510.8
77.5°	196.7	263.1	342.2	375.4	380.5
80°	145.6	196.7	250.3	257.9	257.9
82.5°	97.0	135.4	155.8	158.3	155.8
85°	58.7	71.5	74.1	63.8	58.7
87.5°	20.4	20.4	12.8	7.7	2.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)