

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: P388112

Luminaire Tested: **22CZ2-60VHE-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: P388112  
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: 22CZ2-60VHE-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: 5012.5 lumens  
Efficiency: N/A  
Efficacy: 113.7 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

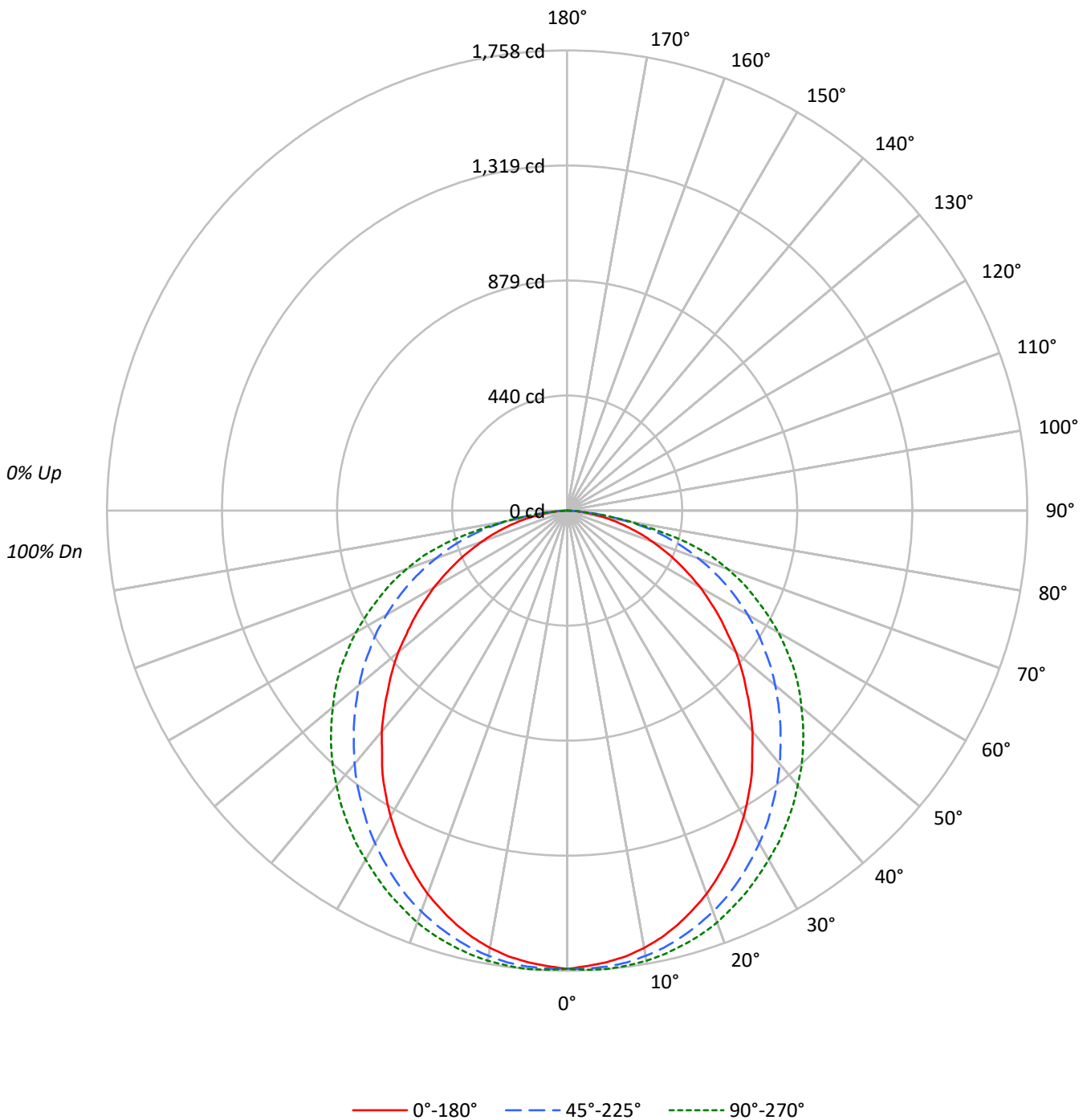
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4712	4712	4712
5°	4679	4723	4749
10°	4635	4720	4771
15°	4560	4699	4785
20°	4462	4667	4796
25°	4337	4620	4789
30°	4191	4561	4783
35°	4041	4494	4799
40°	3869	4438	4814
45°	3685	4382	4853
50°	3526	4343	4890
55°	3337	4308	4967
60°	3162	4289	5019
65°	2954	4257	5060
70°	2714	4193	5129
75°	2449	4081	4947
80°	2101	3612	3724
85°	1689	2130	1689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.0	3.3
10°-20°	474.6	9.5
20°-30°	712.8	14.2
30°-40°	850.1	17.0
40°-50°	879.0	17.5
50°-60°	808.1	16.1
60°-70°	643.3	12.8
70°-80°	393.0	7.8
80°-90°	85.4	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°	1353.4	27.0
0°-40°	2203.6	44.0
0°-60°	3890.7	77.6
0°-90°	5012.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5012.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1751	1751	1751	1751	1751	
5°	1732	1737	1749	1756	1758	164
15°	1637	1656	1687	1710	1718	461
25°	1461	1496	1556	1599	1613	672
35°	1230	1282	1368	1439	1461	767
45°	968	1037	1152	1244	1275	749
55°	711	790	918	1023	1059	636
65°	464	542	668	761	795	460
75°	236	304	392	462	476	251
85°	55	67	69	60	55	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1751.0	1751.0	1751.0	1751.0	1751.0
2.5°	1741.5	1743.8	1751.0	1755.7	1755.7
5°	1732.0	1736.7	1748.6	1755.7	1758.1
7.5°	1717.7	1724.8	1741.5	1751.0	1753.4
10°	1696.3	1705.8	1727.2	1741.5	1746.2
12.5°	1670.1	1684.4	1710.5	1729.6	1734.3
15°	1636.8	1655.8	1686.8	1710.5	1717.7
17.5°	1598.7	1622.5	1660.6	1689.1	1698.6
20°	1558.3	1582.1	1629.7	1663.0	1674.9
22.5°	1510.7	1541.6	1596.3	1634.4	1643.9
25°	1460.7	1496.4	1555.9	1598.7	1613.0
27.5°	1406.0	1448.8	1513.1	1565.4	1577.3
30°	1348.9	1394.1	1467.9	1525.0	1539.3
32.5°	1289.4	1341.8	1420.3	1484.5	1503.6
35°	1230.0	1282.3	1368.0	1439.3	1460.7
37.5°	1161.0	1222.8	1318.0	1391.7	1417.9
40°	1101.5	1161.0	1263.3	1344.2	1370.3
42.5°	1034.9	1099.1	1206.2	1294.2	1325.1
45°	968.3	1037.3	1151.5	1244.2	1275.2
47.5°	906.4	975.4	1094.4	1191.9	1222.8
50°	842.2	913.6	1037.3	1137.2	1168.1
52.5°	773.2	851.7	980.2	1080.1	1115.8
55°	711.3	789.8	918.3	1023.0	1058.7
57.5°	647.1	728.0	861.2	961.1	994.4
60°	587.6	666.1	797.0	894.5	932.6
62.5°	523.4	604.3	732.7	827.9	863.6
65°	463.9	542.4	668.5	761.3	794.6
67.5°	404.4	482.9	601.9	689.9	728.0
70°	345.0	423.5	532.9	618.6	651.9
72.5°	292.6	361.6	466.3	544.8	575.7
75°	235.5	304.5	392.5	461.5	475.8
77.5°	183.2	245.0	318.8	349.7	354.5
80°	135.6	183.2	233.1	240.3	240.3
82.5°	90.4	126.1	145.1	147.5	145.1
85°	54.7	66.6	69.0	59.5	54.7
87.5°	19.0	19.0	11.9	7.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)