

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: P388396

Luminaire Tested: **22CZ2-60VHE-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: P388396  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5154.6 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

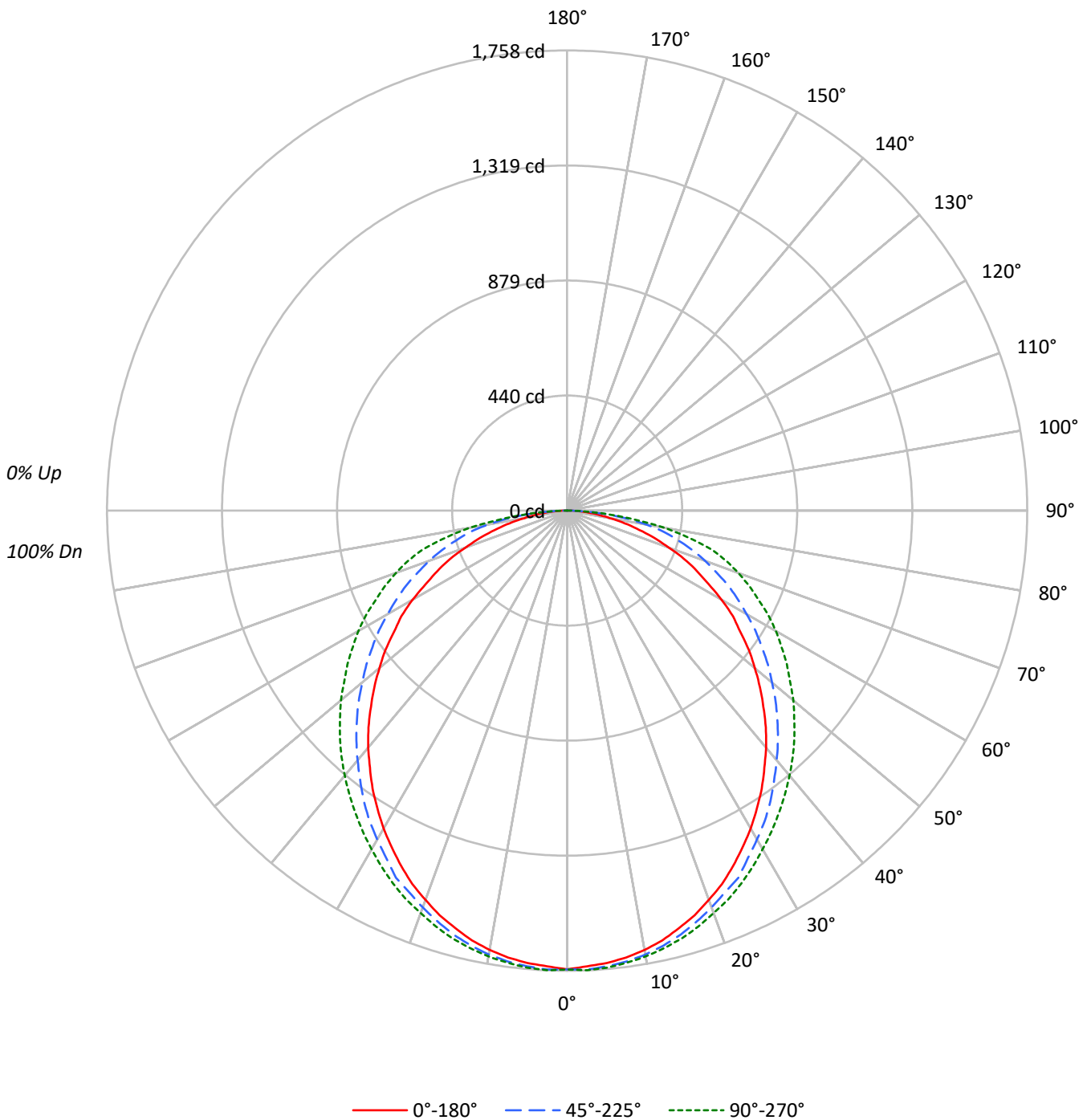
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	4716	4716	4716
5°	4686	4721	4734
10°	4658	4706	4727
15°	4600	4671	4713
20°	4532	4620	4685
25°	4451	4594	4669
30°	4358	4508	4642
35°	4258	4449	4633
40°	4152	4375	4642
45°	4035	4324	4672
50°	3918	4279	4725
55°	3784	4260	4807
60°	3672	4259	4955
65°	3489	4329	5136
70°	3253	4410	5468
75°	2980	4562	5908
80°	2594	4756	5817
85°	2272	4230	4619



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.8	3.2
10°-20°	472.1	9.2
20°-30°	708.7	13.7
30°-40°	846.9	16.4
40°-50°	880.6	17.1
50°-60°	816.2	15.8
60°-70°	669.5	13.0
70°-80°	452.6	8.8
80°-90°	142.2	2.8
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°	1346.6	26.1
0°-40°	2193.5	42.6
0°-60°	3890.3	75.5
0°-90°	5154.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5154.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1753	1753	1753	1753	1753	
5°	1735	1737	1748	1750	1753	165
15°	1651	1659	1677	1687	1692	466
25°	1499	1512	1547	1565	1573	690
35°	1296	1314	1354	1395	1410	810
45°	1060	1080	1136	1202	1228	819
55°	807	832	908	989	1025	725
65°	548	578	680	768	807	542
75°	287	335	439	528	568	304
85°	74	102	137	152	150	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1752.7	1752.7	1752.7	1752.7	1752.7
2.5°	1742.5	1747.6	1755.2	1757.7	1757.7
5°	1734.9	1737.4	1747.6	1750.1	1752.7
7.5°	1722.2	1727.3	1737.4	1740.0	1742.5
10°	1704.5	1709.5	1722.2	1727.3	1729.8
12.5°	1681.6	1686.7	1701.9	1709.5	1712.1
15°	1651.2	1658.8	1676.6	1686.7	1691.8
17.5°	1620.8	1628.4	1646.1	1661.3	1666.4
20°	1582.7	1600.5	1613.2	1633.4	1636.0
22.5°	1544.7	1554.8	1577.6	1597.9	1608.1
25°	1499.0	1511.7	1547.2	1565.0	1572.6
27.5°	1450.8	1468.6	1496.5	1524.4	1534.5
30°	1402.6	1415.3	1450.8	1483.8	1493.9
32.5°	1349.4	1367.1	1405.2	1438.1	1453.4
35°	1296.1	1313.9	1354.4	1395.0	1410.2
37.5°	1237.8	1258.1	1298.6	1346.8	1367.1
40°	1182.0	1197.2	1245.4	1303.7	1321.5
42.5°	1123.6	1141.4	1192.1	1255.5	1275.8
45°	1060.2	1080.5	1136.3	1202.3	1227.6
47.5°	999.3	1019.6	1080.5	1146.5	1176.9
50°	935.9	961.3	1022.2	1098.3	1128.7
52.5°	875.1	897.9	966.4	1045.0	1072.9
55°	806.6	831.9	908.0	989.2	1024.7
57.5°	750.8	768.5	852.2	935.9	971.4
60°	682.3	705.1	791.4	880.1	920.7
62.5°	608.7	646.8	735.6	826.9	867.5
65°	547.9	578.3	679.8	768.5	806.6
67.5°	484.5	517.4	616.3	710.2	753.3
70°	413.4	456.6	560.5	654.4	695.0
72.5°	350.0	395.7	502.2	593.5	636.6
75°	286.6	334.8	438.8	527.6	568.2
77.5°	225.7	279.0	380.5	448.9	474.3
80°	167.4	218.1	306.9	355.1	375.4
82.5°	116.7	159.8	225.7	251.1	256.2
85°	73.6	101.5	137.0	152.2	149.6
87.5°	33.0	40.6	50.7	55.8	53.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)