

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: P389329

Luminaire Tested: **22CZ2-60VHE-S-UNV-L935-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: P389329  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-S-UNV-L935-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5360.6 lumens  
Efficiency: N/A  
Efficacy: 121.6 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

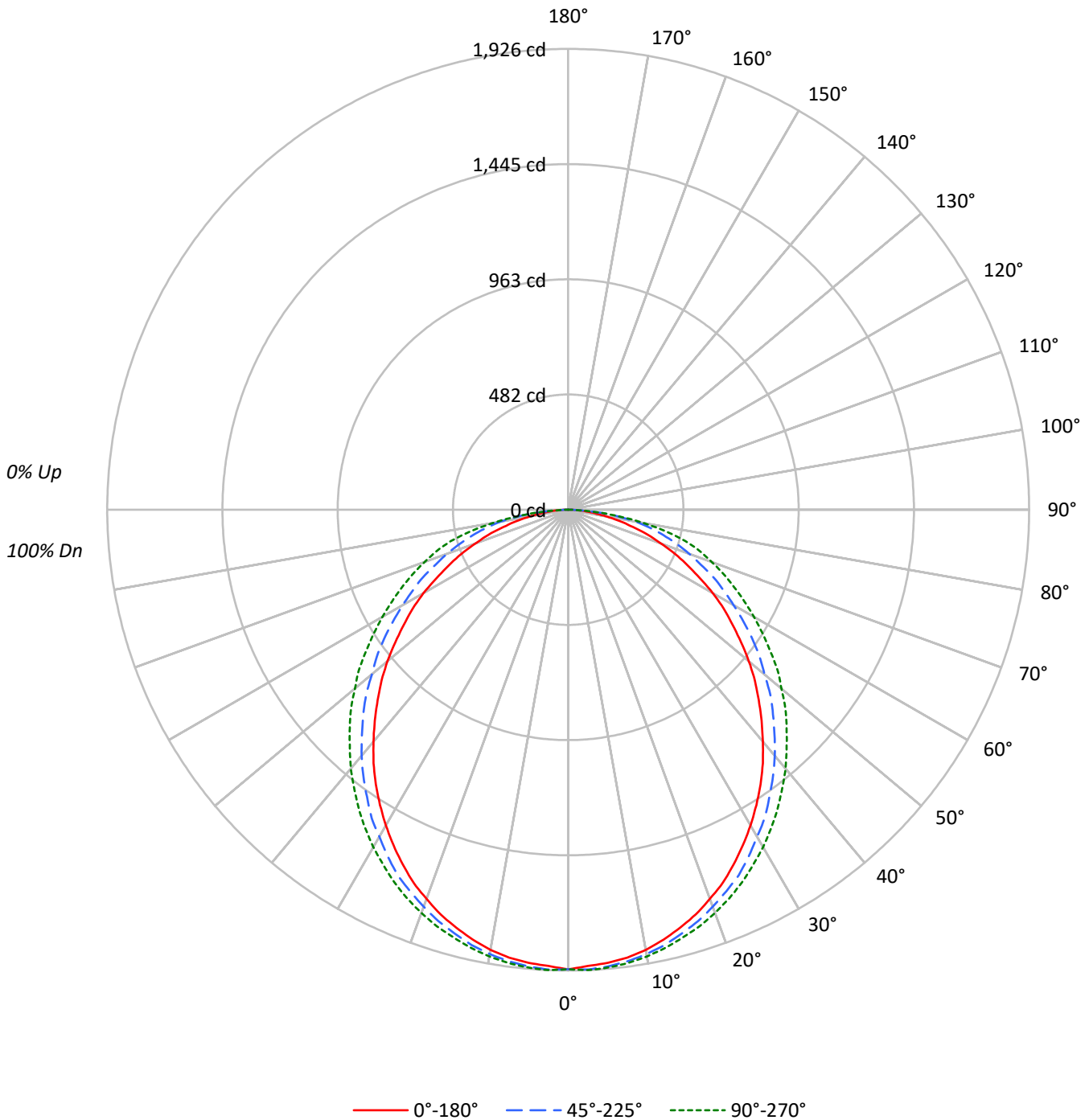
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	5169	5169	5169
5°	5135	5175	5189
10°	5105	5153	5181
15°	5038	5107	5156
20°	4956	5057	5135
25°	4857	5005	5102
30°	4733	4904	5059
35°	4601	4815	5012
40°	4446	4718	4964
45°	4283	4607	4912
50°	4125	4482	4869
55°	3931	4400	4835
60°	3756	4294	4819
65°	3503	4268	4873
70°	3227	4231	5018
75°	2912	4291	5279
80°	2520	4418	4961
85°	2084	3708	3708



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.7	3.4
10°-20°	516.9	9.6
20°-30°	773.5	14.4
30°-40°	916.0	17.1
40°-50°	933.5	17.4
50°-60°	836.7	15.6
60°-70°	655.1	12.2
70°-80°	422.4	7.9
80°-90°	124.8	2.3
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°	1472.1	27.5
0°-40°	2388.1	44.5
0°-60°	4158.3	77.6
0°-90°	5360.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5360.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1921	1921	1921	1921	1921	
5°	1901	1906	1916	1918	1921	180
15°	1808	1818	1833	1848	1851	510
25°	1636	1651	1686	1708	1718	753
35°	1401	1418	1466	1511	1526	875
45°	1126	1150	1210	1273	1291	869
55°	838	865	938	1003	1030	751
65°	550	583	670	735	765	547
75°	280	323	413	483	508	300
85°	68	92	120	120	120	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1920.9	1920.9	1920.9	1920.9	1920.9
2.5°	1908.4	1913.4	1923.4	1925.9	1925.9
5°	1900.9	1905.9	1915.9	1918.4	1920.9
7.5°	1888.4	1890.9	1903.4	1908.4	1910.9
10°	1868.3	1873.3	1885.9	1893.4	1895.9
12.5°	1840.8	1848.3	1863.3	1873.3	1875.8
15°	1808.3	1818.3	1833.3	1848.3	1850.8
17.5°	1773.3	1783.3	1803.3	1820.8	1825.8
20°	1730.8	1743.3	1765.8	1785.8	1793.3
22.5°	1688.3	1698.3	1725.8	1750.8	1758.3
25°	1635.7	1650.7	1685.8	1708.3	1718.3
27.5°	1580.7	1598.2	1633.2	1663.3	1673.3
30°	1523.2	1540.7	1578.2	1615.7	1628.2
32.5°	1463.2	1483.2	1528.2	1565.7	1578.2
35°	1400.6	1418.1	1465.7	1510.7	1525.7
37.5°	1335.6	1350.6	1405.6	1453.2	1468.2
40°	1265.6	1285.6	1343.1	1398.1	1413.1
42.5°	1195.5	1218.1	1275.6	1335.6	1350.6
45°	1125.5	1150.5	1210.5	1273.1	1290.6
47.5°	1058.0	1078.0	1145.5	1205.5	1230.6
50°	985.4	1005.5	1070.5	1138.0	1163.0
52.5°	910.4	937.9	1008.0	1073.0	1103.0
55°	837.9	865.4	937.9	1003.0	1030.5
57.5°	770.3	792.9	867.9	935.4	962.9
60°	697.8	717.8	797.9	870.4	895.4
62.5°	620.3	650.3	732.8	800.4	830.4
65°	550.2	582.8	670.3	735.3	765.3
67.5°	485.2	515.2	600.3	670.3	702.8
70°	410.2	450.2	537.7	607.8	637.8
72.5°	350.2	385.2	475.2	545.2	577.8
75°	280.1	322.6	412.7	482.7	507.7
77.5°	222.6	265.1	350.2	405.2	417.7
80°	162.6	205.1	285.1	312.6	320.1
82.5°	110.0	150.1	205.1	212.6	215.1
85°	67.5	92.5	120.1	120.1	120.1
87.5°	32.5	37.5	42.5	40.0	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)