

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: P389327

Luminaire Tested: **22CZ2-60VHE-S-UNV-L930-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: P389327  
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-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5297.0 lumens  
Efficiency: N/A  
Efficacy: 120.1 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

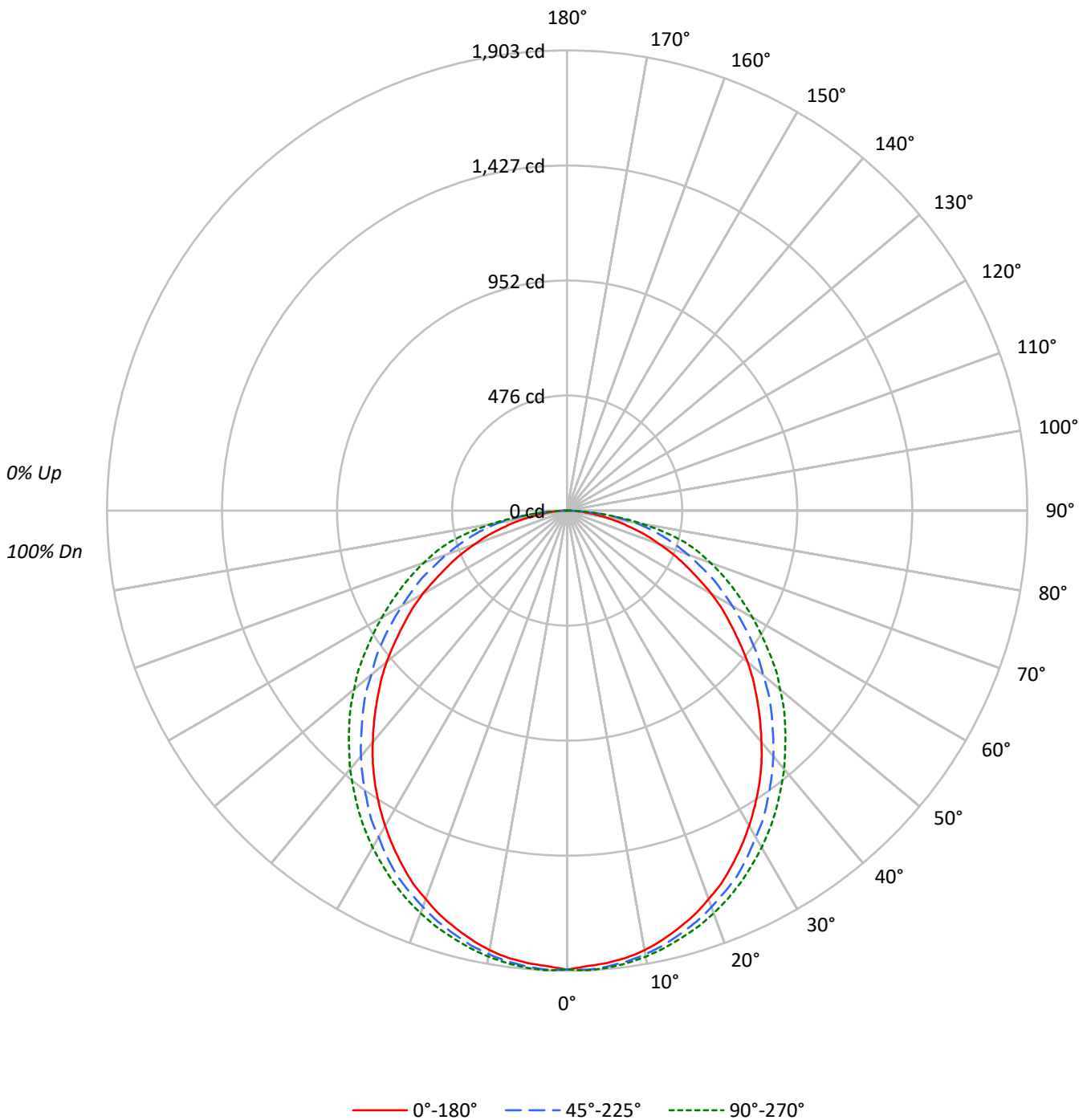
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

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

	0°	45°	90°
0°	5108	5108	5108
5°	5074	5114	5127
10°	5045	5092	5119
15°	4978	5047	5095
20°	4897	4997	5074
25°	4799	4946	5041
30°	4677	4846	4999
35°	4547	4758	4953
40°	4393	4662	4905
45°	4233	4552	4853
50°	4077	4428	4811
55°	3884	4348	4777
60°	3711	4243	4762
65°	3462	4218	4816
70°	3189	4181	4958
75°	2878	4240	5216
80°	2489	4365	4902
85°	2059	3662	3662



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.5	3.4
10°-20°	510.8	9.6
20°-30°	764.3	14.4
30°-40°	905.1	17.1
40°-50°	922.5	17.4
50°-60°	826.8	15.6
60°-70°	647.3	12.2
70°-80°	417.4	7.9
80°-90°	123.3	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°	1454.6	27.5
0°-40°	2359.8	44.5
0°-60°	4109.0	77.6
0°-90°	5297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5297.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1898	1898	1898	1898	1898	
5°	1878	1883	1893	1896	1898	178
15°	1787	1797	1812	1826	1829	504
25°	1616	1631	1666	1688	1698	744
35°	1384	1401	1448	1493	1508	865
45°	1112	1137	1196	1258	1275	859
55°	828	855	927	991	1018	742
65°	544	576	662	727	756	540
75°	277	319	408	477	502	297
85°	67	91	119	119	119	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1898.1	1898.1	1898.1	1898.1	1898.1
2.5°	1885.7	1890.7	1900.6	1903.0	1903.0
5°	1878.3	1883.3	1893.1	1895.6	1898.1
7.5°	1866.0	1868.4	1880.8	1885.7	1888.2
10°	1846.2	1851.1	1863.5	1870.9	1873.4
12.5°	1819.0	1826.4	1841.2	1851.1	1853.6
15°	1786.9	1796.8	1811.6	1826.4	1828.9
17.5°	1752.3	1762.2	1781.9	1799.2	1804.2
20°	1710.2	1722.6	1744.8	1764.6	1772.0
22.5°	1668.2	1678.1	1705.3	1730.0	1737.4
25°	1616.3	1631.2	1665.8	1688.0	1697.9
27.5°	1562.0	1579.3	1613.9	1643.5	1653.4
30°	1505.1	1522.4	1559.5	1596.6	1608.9
32.5°	1445.8	1465.6	1510.1	1547.1	1559.5
35°	1384.0	1401.3	1448.3	1492.8	1507.6
37.5°	1319.8	1334.6	1389.0	1435.9	1450.7
40°	1250.6	1270.3	1327.2	1381.5	1396.4
42.5°	1181.4	1203.6	1260.4	1319.8	1334.6
45°	1112.2	1136.9	1196.2	1258.0	1275.3
47.5°	1045.4	1065.2	1131.9	1191.2	1216.0
50°	973.8	993.5	1057.8	1124.5	1149.2
52.5°	899.6	926.8	996.0	1060.3	1089.9
55°	827.9	855.1	926.8	991.1	1018.2
57.5°	761.2	783.5	857.6	924.3	951.5
60°	689.5	709.3	788.4	860.1	884.8
62.5°	612.9	642.6	724.1	790.9	820.5
65°	543.7	575.8	662.4	726.6	756.3
67.5°	479.5	509.1	593.2	662.4	694.5
70°	405.3	444.9	531.4	600.6	630.2
72.5°	346.0	380.6	469.6	538.8	570.9
75°	276.8	318.8	407.8	477.0	501.7
77.5°	220.0	262.0	346.0	400.4	412.7
80°	160.6	202.7	281.7	308.9	316.3
82.5°	108.7	148.3	202.7	210.1	212.5
85°	66.7	91.4	118.6	118.6	118.6
87.5°	32.1	37.1	42.0	39.5	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)