

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: P390789

Luminaire Tested: **22CZ2-90VHE-HRP-UNV-L930-CD1-SDWPD1-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: P390789  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-90VHE-HRP-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6235.3 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

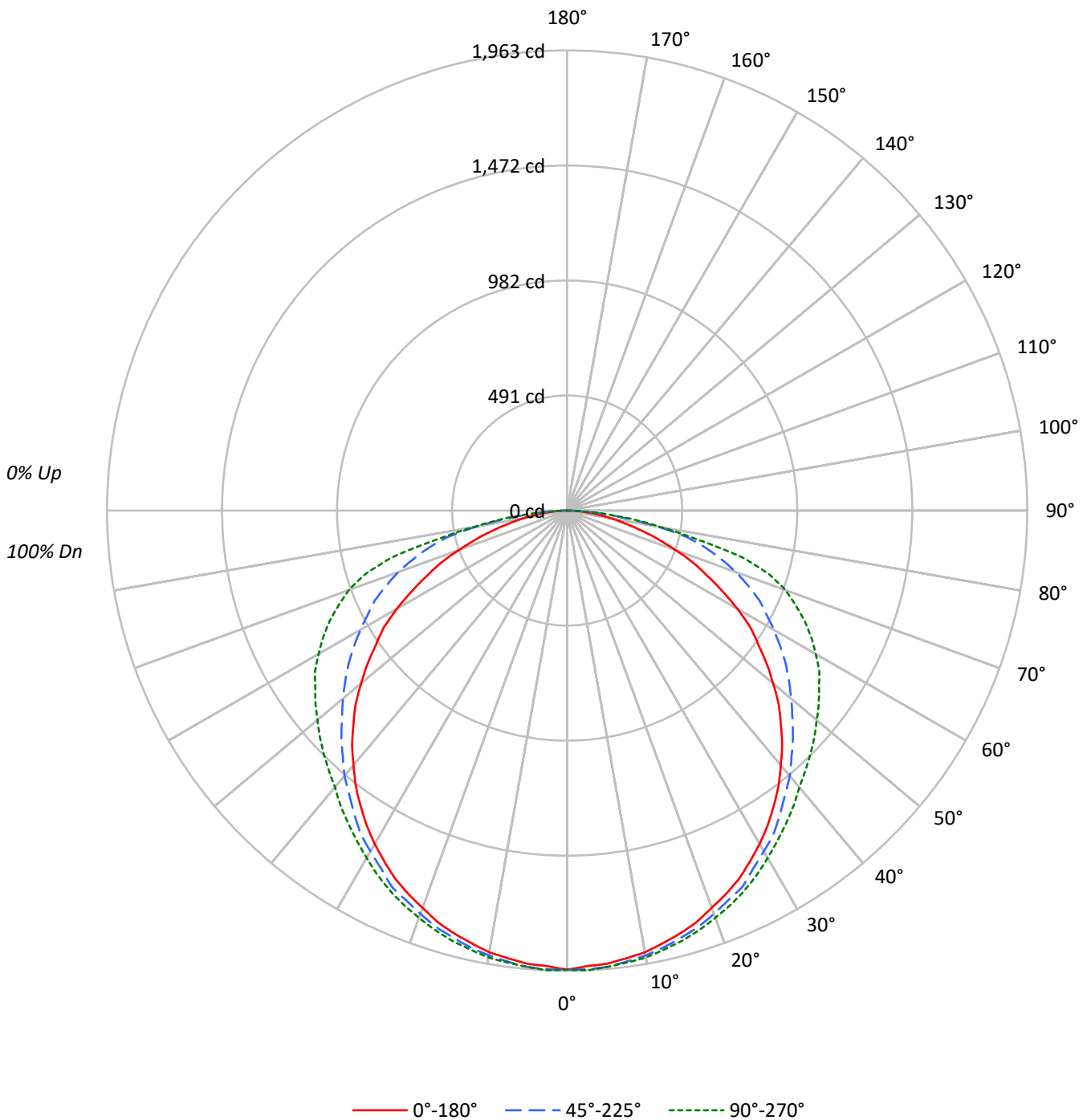
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	5271	5271	5271
5°	5241	5278	5278
10°	5226	5264	5289
15°	5201	5252	5290
20°	5162	5241	5294
25°	5148	5257	5312
30°	5102	5216	5316
35°	5048	5199	5349
40°	4979	5188	5414
45°	4905	5184	5586
50°	4801	5223	5818
55°	4670	5337	6155
60°	4518	5480	6591
65°	4206	5754	7126
70°	3862	6027	7796
75°	3386	6343	8060
80°	2915	6042	6326
85°	2550	4390	4817



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.3	3.0
10°-20°	532.0	8.5
20°-30°	811.6	13.0
30°-40°	991.0	15.9
40°-50°	1059.6	17.0
50°-60°	1022.7	16.4
60°-70°	880.4	14.1
70°-80°	595.7	9.6
80°-90°	157.2	2.5
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°	1528.8	24.5
0°-40°	2519.8	40.4
0°-60°	4602.1	73.8
0°-90°	6235.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6235.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1959	1959	1959	1959	1959	
5°	1940	1945	1954	1954	1954	184
15°	1867	1872	1885	1894	1899	527
25°	1734	1743	1771	1780	1789	798
35°	1537	1550	1582	1615	1628	962
45°	1289	1312	1362	1431	1468	995
55°	995	1028	1138	1252	1312	892
65°	660	725	904	1046	1119	657
75°	326	431	610	734	775	349
85°	83	115	142	147	156	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1958.6	1958.6	1958.6	1958.6	1958.6
2.5°	1944.9	1949.4	1958.6	1958.6	1963.2
5°	1940.3	1944.9	1954.0	1954.0	1954.0
7.5°	1926.5	1931.1	1940.3	1944.9	1944.9
10°	1912.7	1917.3	1926.5	1931.1	1935.7
12.5°	1889.8	1894.4	1908.2	1917.3	1917.3
15°	1866.9	1871.5	1885.2	1894.4	1899.0
17.5°	1839.4	1848.5	1862.3	1871.5	1876.1
20°	1802.7	1811.8	1830.2	1843.9	1848.5
22.5°	1770.6	1779.7	1798.1	1811.8	1821.0
25°	1733.9	1743.0	1770.6	1779.7	1788.9
27.5°	1688.0	1697.2	1720.1	1738.4	1752.2
30°	1642.1	1651.3	1678.8	1701.7	1710.9
32.5°	1591.7	1605.4	1637.5	1655.9	1669.6
35°	1536.6	1550.4	1582.5	1614.6	1628.4
37.5°	1481.6	1495.3	1527.4	1568.7	1587.1
40°	1417.4	1435.7	1477.0	1532.0	1541.2
42.5°	1357.7	1380.7	1417.4	1481.6	1504.5
45°	1288.9	1311.9	1362.3	1431.1	1467.8
47.5°	1224.7	1247.6	1302.7	1385.3	1431.1
50°	1146.7	1178.8	1247.6	1344.0	1389.8
52.5°	1073.3	1100.9	1192.6	1298.1	1353.1
55°	995.4	1027.5	1137.6	1252.2	1311.9
57.5°	926.6	954.1	1077.9	1206.4	1275.2
60°	839.4	876.1	1018.3	1155.9	1224.7
62.5°	747.7	802.7	958.7	1100.9	1174.3
65°	660.5	724.7	903.6	1045.8	1119.2
67.5°	582.5	651.3	834.8	986.2	1055.0
70°	490.8	578.0	766.0	912.8	990.8
72.5°	408.2	504.6	688.0	834.8	903.6
75°	325.7	431.2	610.1	733.9	775.2
77.5°	252.3	353.2	522.9	559.6	564.2
80°	188.1	279.8	389.9	394.5	408.2
82.5°	128.4	197.2	252.3	275.2	279.8
85°	82.6	114.7	142.2	146.8	156.0
87.5°	36.7	41.3	50.5	45.9	45.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)