

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: P390792

Luminaire Tested: **22CZ2-90VHE-HRP-UNV-L935-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: P390792  
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-L935-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6389.5 lumens  
Efficiency: N/A  
Efficacy: 93.7 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

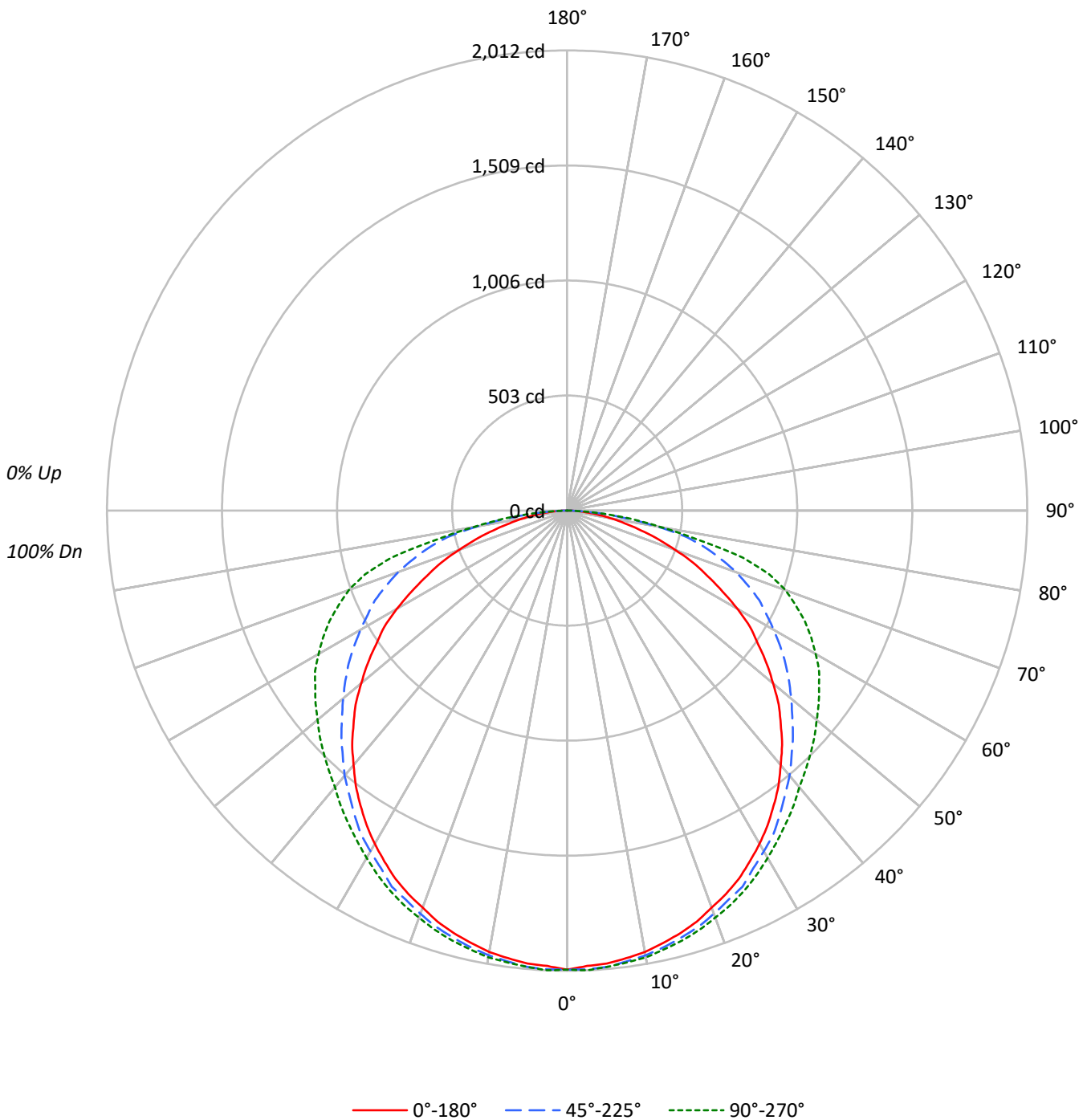
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5401	5401	5401
5°	5371	5409	5409
10°	5356	5394	5420
15°	5329	5382	5421
20°	5290	5371	5424
25°	5275	5387	5443
30°	5229	5345	5448
35°	5173	5327	5481
40°	5102	5317	5548
45°	5026	5313	5724
50°	4919	5352	5962
55°	4785	5469	6307
60°	4630	5616	6754
65°	4310	5896	7303
70°	3957	6176	7988
75°	3470	6499	8259
80°	2986	6191	6482
85°	2612	4499	4934



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.9	3.0
10°-20°	545.1	8.5
20°-30°	831.6	13.0
30°-40°	1015.5	15.9
40°-50°	1085.8	17.0
50°-60°	1048.0	16.4
60°-70°	902.2	14.1
70°-80°	610.4	9.6
80°-90°	161.0	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°	1566.6	24.5
0°-40°	2582.1	40.4
0°-60°	4715.9	73.8
0°-90°	6389.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6389.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2007	2007	2007	2007	2007	
5°	1988	1993	2002	2002	2002	189
15°	1913	1918	1932	1941	1946	540
25°	1777	1786	1814	1824	1833	818
35°	1575	1589	1622	1654	1669	985
45°	1321	1344	1396	1466	1504	1020
55°	1020	1053	1166	1283	1344	914
65°	677	743	926	1072	1147	673
75°	334	442	625	752	794	358
85°	85	118	146	150	160	95
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2007.1	2007.1	2007.1	2007.1	2007.1
2.5°	1993.0	1997.7	2007.1	2007.1	2011.8
5°	1988.3	1993.0	2002.4	2002.4	2002.4
7.5°	1974.2	1978.9	1988.3	1993.0	1993.0
10°	1960.0	1964.7	1974.2	1978.9	1983.6
12.5°	1936.5	1941.2	1955.3	1964.7	1964.7
15°	1913.0	1917.7	1931.8	1941.2	1945.9
17.5°	1884.8	1894.2	1908.3	1917.7	1922.4
20°	1847.2	1856.6	1875.4	1889.5	1894.2
22.5°	1814.3	1823.7	1842.5	1856.6	1866.0
25°	1776.7	1786.1	1814.3	1823.7	1833.1
27.5°	1729.7	1739.1	1762.6	1781.4	1795.5
30°	1682.7	1692.1	1720.3	1743.8	1753.2
32.5°	1631.0	1645.1	1678.0	1696.8	1710.9
35°	1574.6	1588.7	1621.6	1654.5	1668.6
37.5°	1518.2	1532.3	1565.2	1607.5	1626.3
40°	1452.4	1471.2	1513.5	1569.9	1579.3
42.5°	1391.3	1414.8	1452.4	1518.2	1541.7
45°	1320.8	1344.3	1396.0	1466.5	1504.1
47.5°	1255.0	1278.5	1334.9	1419.5	1466.5
50°	1175.1	1208.0	1278.5	1377.2	1424.2
52.5°	1099.9	1128.1	1222.1	1330.2	1386.6
55°	1020.0	1052.9	1165.7	1283.2	1344.3
57.5°	949.5	977.7	1104.6	1236.2	1306.7
60°	860.2	897.8	1043.5	1184.5	1255.0
62.5°	766.2	822.6	982.4	1128.1	1203.3
65°	676.9	742.7	926.0	1071.7	1146.9
67.5°	596.9	667.5	855.5	1010.6	1081.1
70°	502.9	592.2	785.0	935.4	1015.3
72.5°	418.3	517.0	705.1	855.5	926.0
75°	333.7	441.8	625.1	752.1	794.4
77.5°	258.5	361.9	535.8	573.4	578.1
80°	192.7	286.7	399.5	404.2	418.3
82.5°	131.6	202.1	258.5	282.0	286.7
85°	84.6	117.5	145.7	150.4	159.8
87.5°	37.6	42.3	51.7	47.0	47.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)