

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: P390698

Luminaire Tested: **22CZ2-80VHE-HRP-UNV-L935-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: P390698  
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: 22CZ2-80VHE-HRP-UNV-L935-CD1-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: 5807.4 lumens  
Efficiency: N/A  
Efficacy: 98.3 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

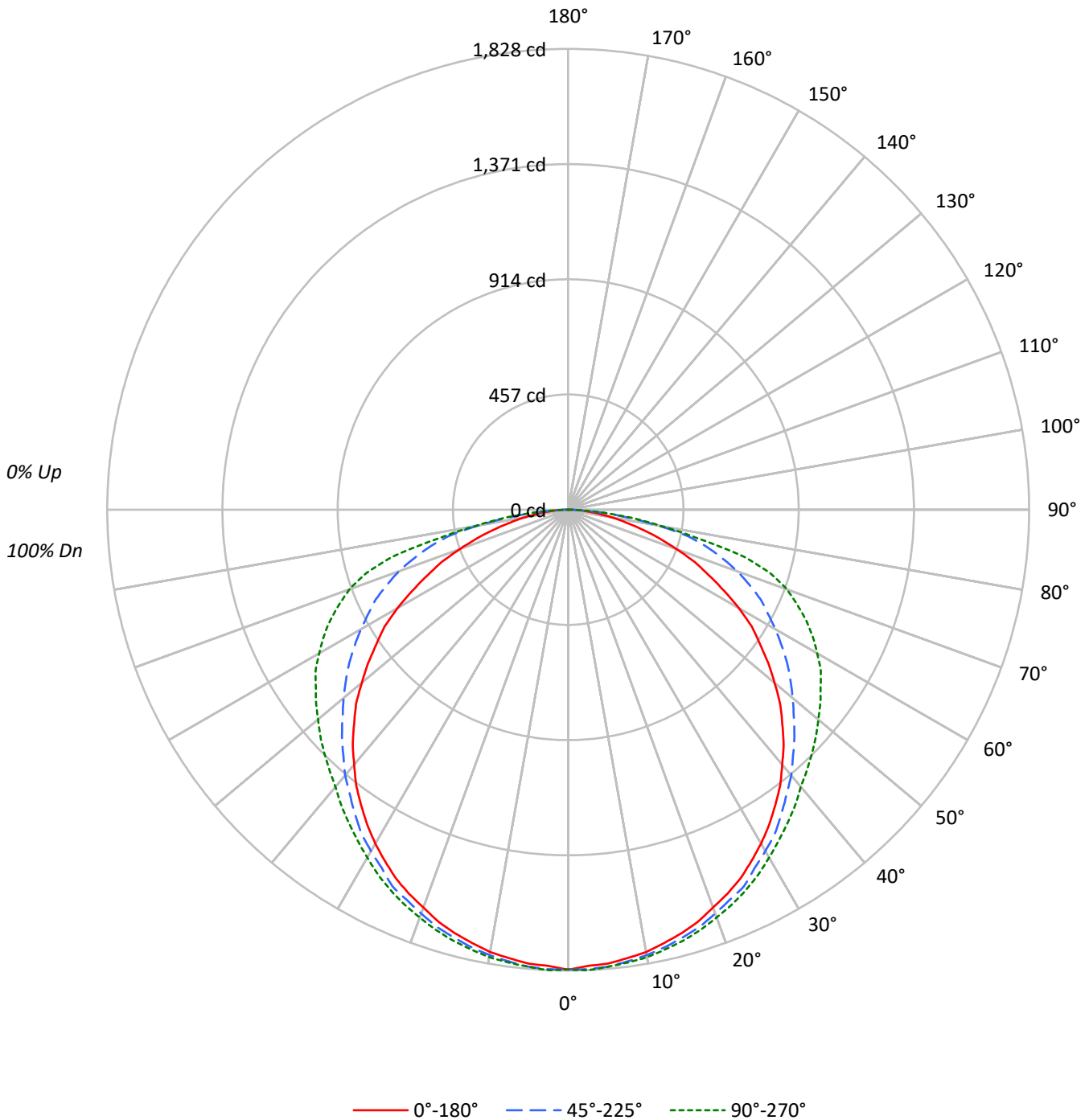
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4909	4909	4909
5°	4881	4916	4916
10°	4868	4903	4926
15°	4844	4892	4927
20°	4808	4881	4930
25°	4795	4896	4947
30°	4752	4859	4951
35°	4702	4842	4982
40°	4637	4832	5042
45°	4569	4829	5203
50°	4471	4865	5419
55°	4350	4971	5732
60°	4208	5104	6139
65°	3917	5359	6637
70°	3596	5613	7260
75°	3153	5908	7507
80°	2715	5627	5892
85°	2374	4088	4486



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.6	3.0
10°-20°	495.5	8.5
20°-30°	755.9	13.0
30°-40°	923.0	15.9
40°-50°	986.9	17.0
50°-60°	952.5	16.4
60°-70°	820.0	14.1
70°-80°	554.8	9.6
80°-90°	146.4	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°	1423.9	24.5
0°-40°	2346.9	40.4
0°-60°	4286.3	73.8
0°-90°	5807.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5807.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1824	1824	1824	1824	1824	
5°	1807	1811	1820	1820	1820	172
15°	1739	1743	1756	1764	1769	491
25°	1615	1623	1649	1658	1666	743
35°	1431	1444	1474	1504	1517	896
45°	1200	1222	1269	1333	1367	927
55°	927	957	1060	1166	1222	831
65°	615	675	842	974	1042	612
75°	303	402	568	684	722	325
85°	77	107	132	137	145	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1824.2	1824.2	1824.2	1824.2	1824.2
2.5°	1811.4	1815.7	1824.2	1824.2	1828.5
5°	1807.1	1811.4	1819.9	1819.9	1819.9
7.5°	1794.3	1798.6	1807.1	1811.4	1811.4
10°	1781.5	1785.8	1794.3	1798.6	1802.8
12.5°	1760.1	1764.4	1777.2	1785.8	1785.8
15°	1738.8	1743.0	1755.9	1764.4	1768.7
17.5°	1713.1	1721.7	1734.5	1743.0	1747.3
20°	1679.0	1687.5	1704.6	1717.4	1721.7
22.5°	1649.0	1657.6	1674.7	1687.5	1696.0
25°	1614.9	1623.4	1649.0	1657.6	1666.1
27.5°	1572.1	1580.7	1602.1	1619.1	1632.0
30°	1529.4	1538.0	1563.6	1585.0	1593.5
32.5°	1482.4	1495.3	1525.2	1542.2	1555.1
35°	1431.2	1444.0	1473.9	1503.8	1516.6
37.5°	1379.9	1392.7	1422.6	1461.1	1478.2
40°	1320.1	1337.2	1375.6	1426.9	1435.4
42.5°	1264.6	1285.9	1320.1	1379.9	1401.3
45°	1200.5	1221.8	1268.8	1332.9	1367.1
47.5°	1140.7	1162.0	1213.3	1290.2	1332.9
50°	1068.0	1097.9	1162.0	1251.7	1294.5
52.5°	999.7	1025.3	1110.8	1209.0	1260.3
55°	927.1	957.0	1059.5	1166.3	1221.8
57.5°	863.0	888.6	1004.0	1123.6	1187.7
60°	781.8	816.0	948.4	1076.6	1140.7
62.5°	696.4	747.6	892.9	1025.3	1093.7
65°	615.2	675.0	841.6	974.0	1042.4
67.5°	542.6	606.6	777.5	918.5	982.6
70°	457.1	538.3	713.4	850.2	922.8
72.5°	380.2	469.9	640.8	777.5	841.6
75°	303.3	401.6	568.2	683.5	722.0
77.5°	235.0	329.0	487.0	521.2	525.5
80°	175.2	260.6	363.1	367.4	380.2
82.5°	119.6	183.7	235.0	256.3	260.6
85°	76.9	106.8	132.4	136.7	145.3
87.5°	34.2	38.4	47.0	42.7	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)