

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: P390699

Luminaire Tested: **22CZ2-80VHE-HRP-UNV-L940-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: P390699  
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-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5724.8 lumens  
Efficiency: N/A  
Efficacy: 96.9 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

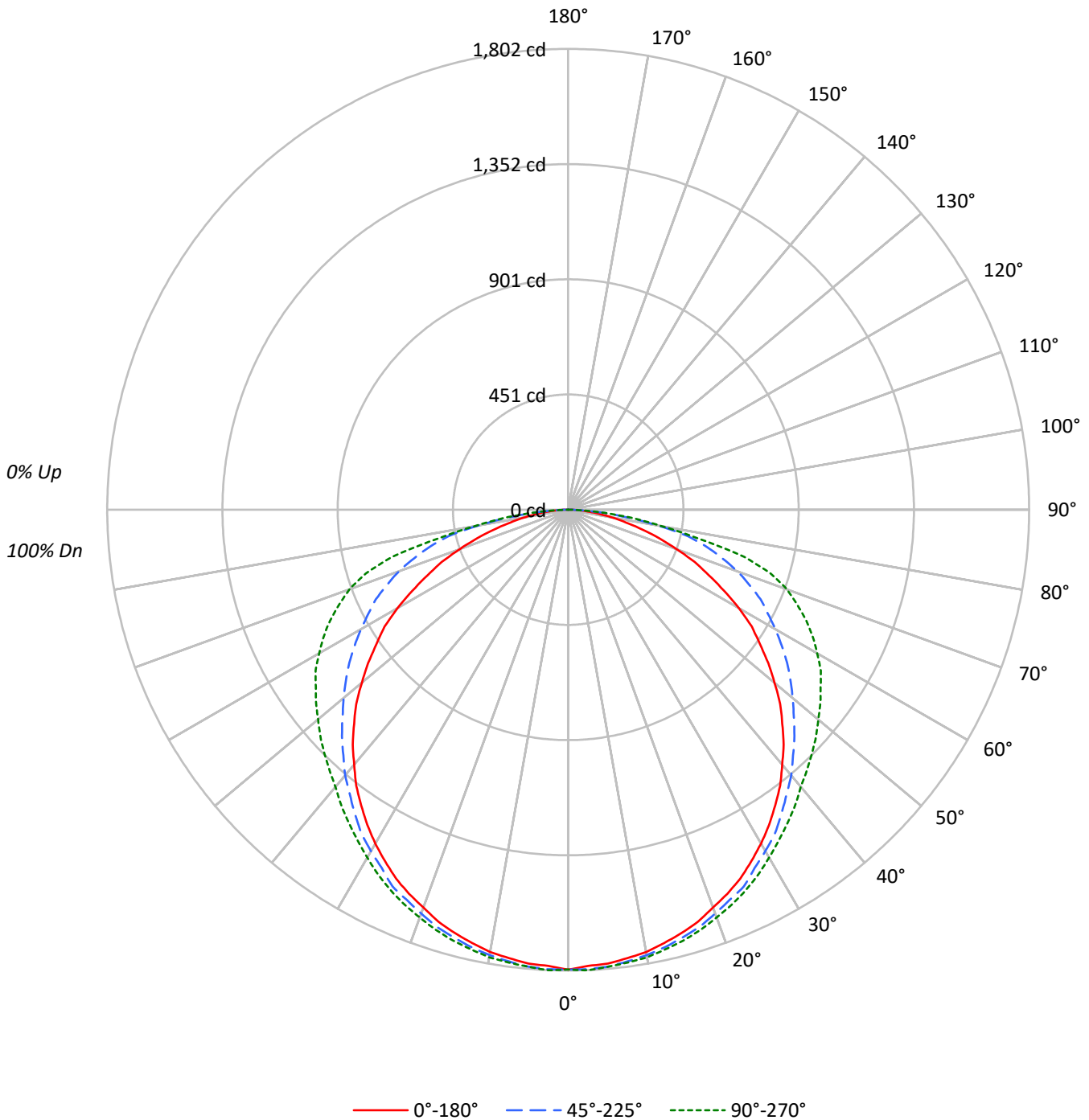
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4839	4839	4839
5°	4812	4846	4846
10°	4799	4833	4856
15°	4775	4822	4857
20°	4740	4812	4860
25°	4727	4827	4877
30°	4685	4790	4881
35°	4635	4773	4911
40°	4571	4764	4971
45°	4504	4760	5128
50°	4407	4796	5342
55°	4288	4900	5651
60°	4148	5032	6051
65°	3861	5282	6543
70°	3545	5533	7157
75°	3109	5823	7400
80°	2676	5548	5808
85°	2340	4032	4421



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.1	3.0
10°-20°	488.4	8.5
20°-30°	745.1	13.0
30°-40°	909.8	15.9
40°-50°	972.8	17.0
50°-60°	939.0	16.4
60°-70°	808.3	14.1
70°-80°	546.9	9.6
80°-90°	144.3	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°	1403.6	24.5
0°-40°	2313.5	40.4
0°-60°	4225.3	73.8
0°-90°	5724.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5724.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1798	1798	1798	1798	1798	
5°	1781	1786	1794	1794	1794	169
15°	1714	1718	1731	1739	1744	484
25°	1592	1600	1626	1634	1642	733
35°	1411	1423	1453	1482	1495	883
45°	1183	1204	1251	1314	1348	913
55°	914	943	1044	1150	1204	819
65°	606	665	830	960	1028	603
75°	299	396	560	674	712	321
85°	76	105	131	135	143	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1798.3	1798.3	1798.3	1798.3	1798.3
2.5°	1785.6	1789.8	1798.3	1798.3	1802.5
5°	1781.4	1785.6	1794.0	1794.0	1794.0
7.5°	1768.8	1773.0	1781.4	1785.6	1785.6
10°	1756.1	1760.4	1768.8	1773.0	1777.2
12.5°	1735.1	1739.3	1751.9	1760.4	1760.4
15°	1714.0	1718.2	1730.9	1739.3	1743.5
17.5°	1688.8	1697.2	1709.8	1718.2	1722.5
20°	1655.1	1663.5	1680.3	1693.0	1697.2
22.5°	1625.6	1634.0	1650.9	1663.5	1671.9
25°	1591.9	1600.3	1625.6	1634.0	1642.4
27.5°	1549.8	1558.2	1579.3	1596.1	1608.7
30°	1507.7	1516.1	1541.4	1562.4	1570.8
32.5°	1461.3	1474.0	1503.5	1520.3	1532.9
35°	1410.8	1423.4	1452.9	1482.4	1495.0
37.5°	1360.3	1372.9	1402.4	1440.3	1457.1
40°	1301.3	1318.2	1356.1	1406.6	1415.0
42.5°	1246.6	1267.6	1301.3	1360.3	1381.3
45°	1183.4	1204.5	1250.8	1314.0	1347.6
47.5°	1124.4	1145.5	1196.0	1271.8	1314.0
50°	1052.8	1082.3	1145.5	1233.9	1276.0
52.5°	985.5	1010.7	1095.0	1191.8	1242.4
55°	913.9	943.3	1044.4	1149.7	1204.5
57.5°	850.7	876.0	989.7	1107.6	1170.8
60°	770.7	804.4	934.9	1061.3	1124.4
62.5°	686.5	737.0	880.2	1010.7	1078.1
65°	606.4	665.4	829.6	960.2	1027.6
67.5°	534.8	598.0	766.5	905.4	968.6
70°	450.6	530.6	703.3	838.1	909.7
72.5°	374.8	463.3	631.7	766.5	829.6
75°	299.0	395.9	560.1	673.8	711.7
77.5°	231.6	324.3	480.1	513.8	518.0
80°	172.7	256.9	358.0	362.2	374.8
82.5°	117.9	181.1	231.6	252.7	256.9
85°	75.8	105.3	130.6	134.8	143.2
87.5°	33.7	37.9	46.3	42.1	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)