

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: P390966

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L950-CD2-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: P390966  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-110VHE-RDP-UNV-L950-CD2-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6603.2 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

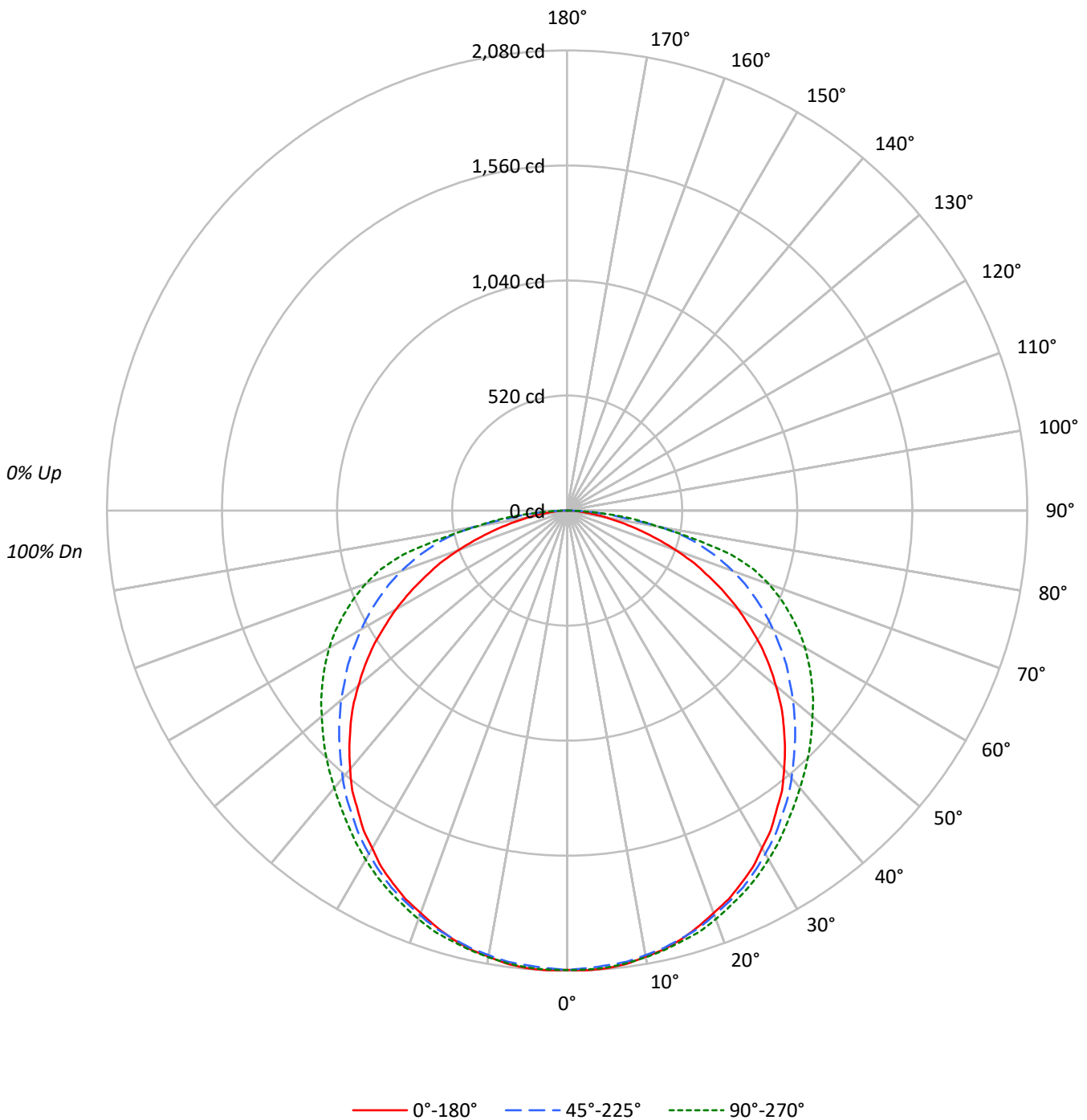
Input Watts (W): 77.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

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

	0°	45°	90°
0°	2794	2794	2794
5°	2805	2787	2800
10°	2797	2788	2801
15°	2792	2788	2806
20°	2772	2786	2814
25°	2762	2791	2820
30°	2738	2783	2829
35°	2711	2776	2840
40°	2681	2773	2876
45°	2636	2773	2942
50°	2578	2790	3030
55°	2512	2835	3165
60°	2406	2891	3340
65°	2252	2993	3545
70°	2049	3131	3814
75°	1737	3303	3984
80°	1371	3325	3223
85°	1011	2529	2831



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.0	3.0
10°-20°	566.9	8.6
20°-30°	866.9	13.1
30°-40°	1059.8	16.0
40°-50°	1129.5	17.1
50°-60°	1080.0	16.4
60°-70°	914.9	13.9
70°-80°	614.9	9.3
80°-90°	173.4	2.6
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°	1630.8	24.7
0°-40°	2690.6	40.7
0°-60°	4900.0	74.2
0°-90°	6603.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6603.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2076	2076	2076	2076	2076	
5°	2076	2073	2063	2073	2073	197
15°	2004	2004	2001	2018	2014	565
25°	1860	1867	1880	1896	1900	857
35°	1651	1664	1690	1723	1729	1034
45°	1385	1408	1458	1520	1546	1069
55°	1071	1110	1209	1304	1349	954
65°	708	780	940	1064	1114	702
75°	334	455	635	744	766	358
85°	66	134	164	177	183	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2076.5	2076.5	2076.5	2076.5	2076.5
2.5°	2079.8	2079.8	2070.0	2076.5	2076.5
5°	2076.5	2073.2	2063.4	2073.2	2073.2
7.5°	2066.7	2063.4	2056.9	2066.7	2063.4
10°	2047.0	2047.0	2040.5	2050.3	2050.3
12.5°	2030.7	2027.4	2024.1	2037.2	2033.9
15°	2004.5	2004.5	2001.2	2017.6	2014.3
17.5°	1971.7	1975.0	1978.3	1991.4	1994.6
20°	1935.7	1942.2	1945.5	1965.2	1965.2
22.5°	1902.9	1906.2	1912.8	1932.4	1932.4
25°	1860.4	1866.9	1880.0	1896.4	1899.7
27.5°	1817.8	1821.0	1837.4	1860.4	1863.6
30°	1762.1	1771.9	1791.6	1817.8	1821.0
32.5°	1713.0	1722.8	1745.7	1771.9	1778.5
35°	1650.7	1663.8	1690.0	1722.8	1729.3
37.5°	1595.1	1604.9	1637.6	1673.7	1683.5
40°	1526.3	1545.9	1578.7	1621.3	1637.6
42.5°	1457.5	1477.1	1516.4	1572.1	1591.8
45°	1385.4	1408.4	1457.5	1519.7	1545.9
47.5°	1313.4	1339.6	1395.3	1467.3	1496.8
50°	1231.5	1264.3	1333.0	1414.9	1447.7
52.5°	1152.9	1192.2	1267.5	1359.2	1401.8
55°	1071.0	1110.3	1208.6	1303.6	1349.4
57.5°	979.3	1031.7	1139.8	1247.9	1297.0
60°	894.1	943.3	1074.3	1192.2	1241.3
62.5°	802.4	867.9	1008.8	1133.2	1182.4
65°	707.5	779.5	940.0	1064.5	1113.6
67.5°	622.3	700.9	871.2	995.7	1044.8
70°	520.8	619.0	795.9	920.3	969.5
72.5°	425.8	533.9	717.3	838.5	884.3
75°	334.1	455.3	635.4	743.5	766.4
77.5°	248.9	376.7	550.2	596.1	579.7
80°	176.9	301.3	429.1	406.1	416.0
82.5°	114.6	229.3	265.3	301.3	311.2
85°	65.5	134.3	163.8	176.9	183.4
87.5°	29.5	49.1	65.5	65.5	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)