

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: P390968

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L950-CD2-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: P390968  
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-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

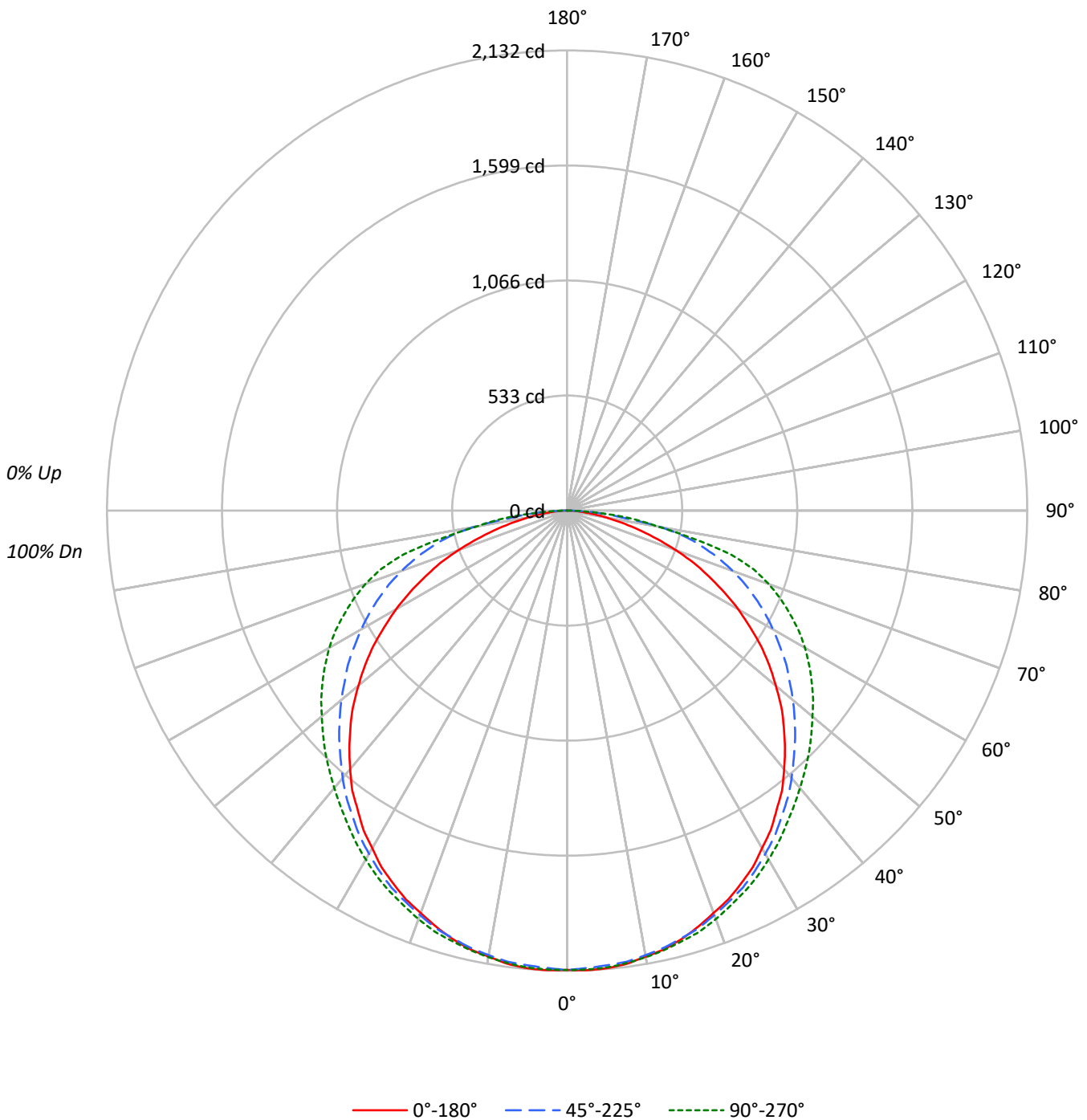
Lumens per Lamp: N/A  
Luminaire Lumens: 6767.7 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 77.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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			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
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°	2863	2863	2863
5°	2874	2856	2870
10°	2866	2857	2871
15°	2862	2857	2876
20°	2841	2855	2884
25°	2831	2860	2890
30°	2806	2853	2900
35°	2779	2845	2911
40°	2748	2842	2948
45°	2702	2842	3015
50°	2642	2860	3106
55°	2575	2906	3244
60°	2466	2963	3423
65°	2309	3067	3634
70°	2100	3209	3909
75°	1780	3385	4083
80°	1405	3407	3303
85°	1036	2590	2902



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.9	3.0
10°-20°	581.0	8.6
20°-30°	888.5	13.1
30°-40°	1086.2	16.0
40°-50°	1157.6	17.1
50°-60°	1106.9	16.4
60°-70°	937.6	13.9
70°-80°	630.2	9.3
80°-90°	177.8	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°	1671.4	24.7
0°-40°	2757.6	40.7
0°-60°	5022.1	74.2
0°-90°	6767.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6767.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2128	2128	2128	2128	2128	
5°	2128	2125	2115	2125	2125	202
15°	2054	2054	2051	2068	2064	579
25°	1907	1913	1927	1944	1947	879
35°	1692	1705	1732	1766	1772	1060
45°	1420	1443	1494	1558	1584	1095
55°	1098	1138	1239	1336	1383	978
65°	725	799	963	1091	1141	720
75°	342	467	651	762	786	367
85°	67	138	168	181	188	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2128.2	2128.2	2128.2	2128.2	2128.2
2.5°	2131.6	2131.6	2121.5	2128.2	2128.2
5°	2128.2	2124.9	2114.8	2124.9	2124.9
7.5°	2118.2	2114.8	2108.1	2118.2	2114.8
10°	2098.0	2098.0	2091.3	2101.4	2101.4
12.5°	2081.3	2077.9	2074.5	2088.0	2084.6
15°	2054.4	2054.4	2051.0	2067.8	2064.5
17.5°	2020.8	2024.2	2027.5	2041.0	2044.3
20°	1983.9	1990.6	1994.0	2014.1	2014.1
22.5°	1950.3	1953.7	1960.4	1980.5	1980.5
25°	1906.7	1913.4	1926.8	1943.6	1947.0
27.5°	1863.1	1866.4	1883.2	1906.7	1910.1
30°	1806.0	1816.1	1836.2	1863.1	1866.4
32.5°	1755.6	1765.7	1789.2	1816.1	1822.8
35°	1691.9	1705.3	1732.1	1765.7	1772.4
37.5°	1634.8	1644.9	1678.4	1715.4	1725.4
40°	1564.3	1584.4	1618.0	1661.6	1678.4
42.5°	1493.8	1513.9	1554.2	1611.3	1631.4
45°	1420.0	1443.4	1493.8	1557.6	1584.4
47.5°	1346.1	1373.0	1430.0	1503.9	1534.1
50°	1262.2	1295.7	1366.2	1450.2	1483.7
52.5°	1181.6	1221.9	1299.1	1393.1	1436.7
55°	1097.7	1138.0	1238.7	1336.0	1383.0
57.5°	1003.7	1057.4	1168.2	1279.0	1329.3
60°	916.4	966.8	1101.0	1221.9	1272.2
62.5°	822.4	889.6	1033.9	1161.5	1211.8
65°	725.1	798.9	963.4	1091.0	1141.3
67.5°	637.8	718.4	892.9	1020.5	1070.8
70°	533.7	634.4	815.7	943.3	993.6
72.5°	436.4	547.2	735.2	859.4	906.4
75°	342.4	466.6	651.2	762.0	785.5
77.5°	255.1	386.0	564.0	610.9	594.2
80°	181.3	308.8	439.7	416.3	426.3
82.5°	117.5	235.0	271.9	308.8	318.9
85°	67.1	137.6	167.8	181.3	188.0
87.5°	30.2	50.4	67.1	67.1	63.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)