

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: P391848

Luminaire Tested: **24CZ2-95VHE-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: P391848  
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: 24CZ2-95VHE-HRP-UNV-L935-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

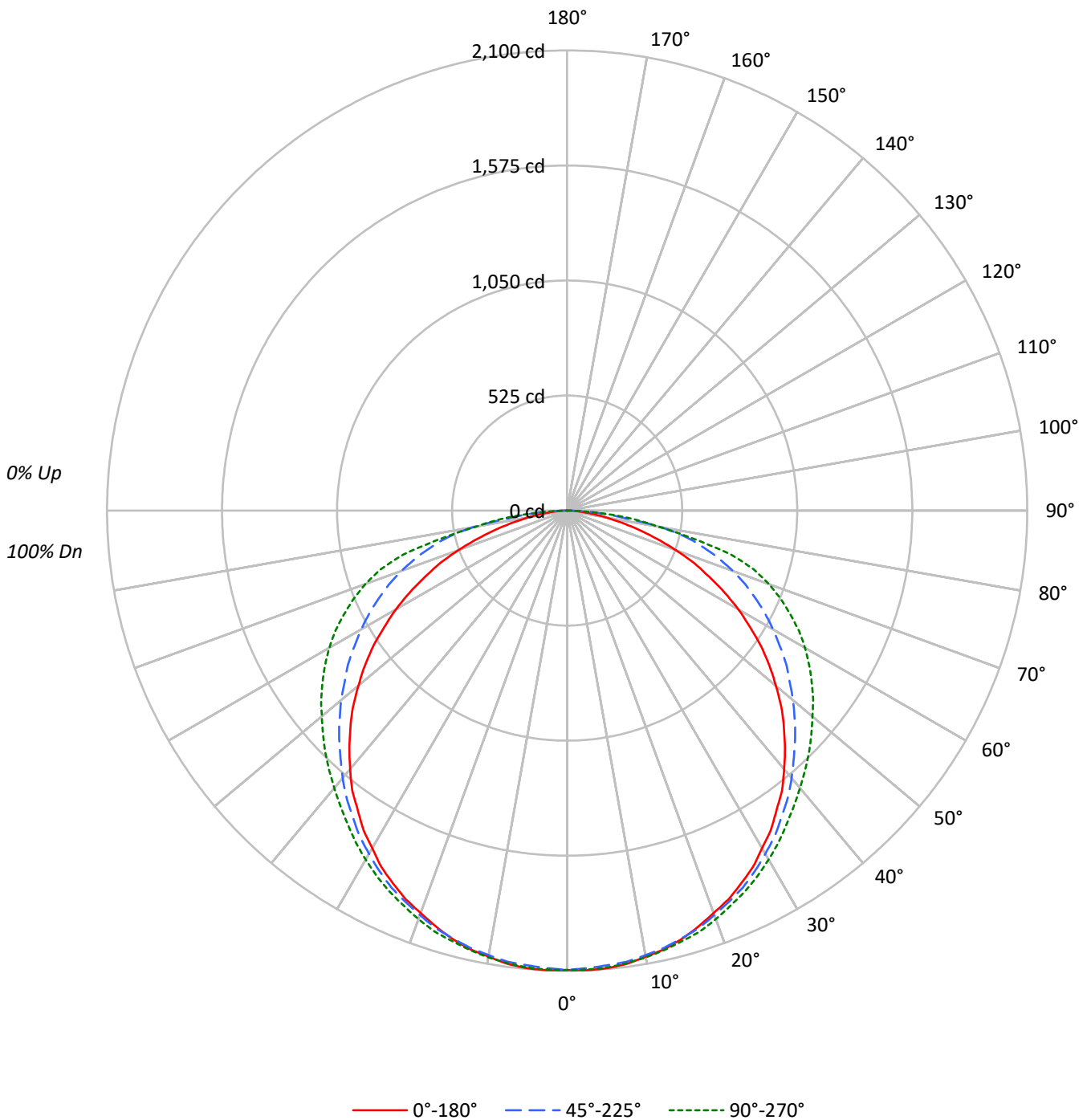
Lumens per Lamp: N/A  
Luminaire Lumens: 6666.8 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 65.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	2821	2821	2821
5°	2832	2814	2827
10°	2824	2815	2828
15°	2819	2814	2833
20°	2798	2812	2841
25°	2788	2818	2847
30°	2764	2810	2857
35°	2737	2803	2868
40°	2707	2800	2904
45°	2662	2800	2970
50°	2603	2817	3059
55°	2537	2862	3196
60°	2429	2919	3373
65°	2274	3022	3579
70°	2068	3161	3851
75°	1753	3335	4023
80°	1384	3357	3254
85°	1020	2552	2859



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.9	3.0
10°-20°	572.4	8.6
20°-30°	875.3	13.1
30°-40°	1070.0	16.0
40°-50°	1140.4	17.1
50°-60°	1090.4	16.4
60°-70°	923.7	13.9
70°-80°	620.8	9.3
80°-90°	175.1	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°	1646.5	24.7
0°-40°	2716.5	40.7
0°-60°	4947.2	74.2
0°-90°	6666.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6666.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2096	2096	2096	2096	2096	
5°	2096	2093	2083	2093	2093	199
15°	2024	2024	2020	2037	2034	571
25°	1878	1885	1898	1915	1918	866
35°	1667	1680	1706	1739	1746	1044
45°	1399	1422	1472	1534	1561	1079
55°	1081	1121	1220	1316	1362	963
65°	714	787	949	1075	1124	709
75°	337	460	642	751	774	361
85°	66	136	165	179	185	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2096.5	2096.5	2096.5	2096.5	2096.5
2.5°	2099.8	2099.8	2089.9	2096.5	2096.5
5°	2096.5	2093.2	2083.3	2093.2	2093.2
7.5°	2086.6	2083.3	2076.7	2086.6	2083.3
10°	2066.8	2066.8	2060.1	2070.1	2070.1
12.5°	2050.2	2046.9	2043.6	2056.8	2053.5
15°	2023.8	2023.8	2020.5	2037.0	2033.7
17.5°	1990.7	1994.0	1997.3	2010.5	2013.8
20°	1954.3	1960.9	1964.2	1984.1	1984.1
22.5°	1921.3	1924.6	1931.2	1951.0	1951.0
25°	1878.3	1884.9	1898.1	1914.6	1918.0
27.5°	1835.3	1838.6	1855.1	1878.3	1881.6
30°	1779.1	1789.0	1808.8	1835.3	1838.6
32.5°	1729.5	1739.4	1762.5	1789.0	1795.6
35°	1666.6	1679.9	1706.3	1739.4	1746.0
37.5°	1610.4	1620.3	1653.4	1689.8	1699.7
40°	1541.0	1560.8	1593.9	1636.9	1653.4
42.5°	1471.5	1491.4	1531.1	1587.3	1607.1
45°	1398.8	1421.9	1471.5	1534.4	1560.8
47.5°	1326.0	1352.5	1408.7	1481.5	1511.2
50°	1243.4	1276.4	1345.9	1428.5	1461.6
52.5°	1164.0	1203.7	1279.7	1372.3	1415.3
55°	1081.3	1121.0	1220.2	1316.1	1362.4
57.5°	988.7	1041.6	1150.8	1259.9	1309.5
60°	902.8	952.4	1084.6	1203.7	1253.3
62.5°	810.2	876.3	1018.5	1144.2	1193.8
65°	714.3	787.0	949.1	1074.7	1124.3
67.5°	628.3	707.7	879.6	1005.3	1054.9
70°	525.8	625.0	803.6	929.2	978.8
72.5°	429.9	539.0	724.2	846.5	892.8
75°	337.3	459.6	641.5	750.6	773.8
77.5°	251.3	380.3	555.5	601.8	585.3
80°	178.6	304.2	433.2	410.0	420.0
82.5°	115.7	231.5	267.9	304.2	314.1
85°	66.1	135.6	165.3	178.6	185.2
87.5°	29.8	49.6	66.1	66.1	62.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)