

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: P391705

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L935-CD1-SWPD1-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: P391705  
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: 24CZ2-80VHE-HRP-UNV-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

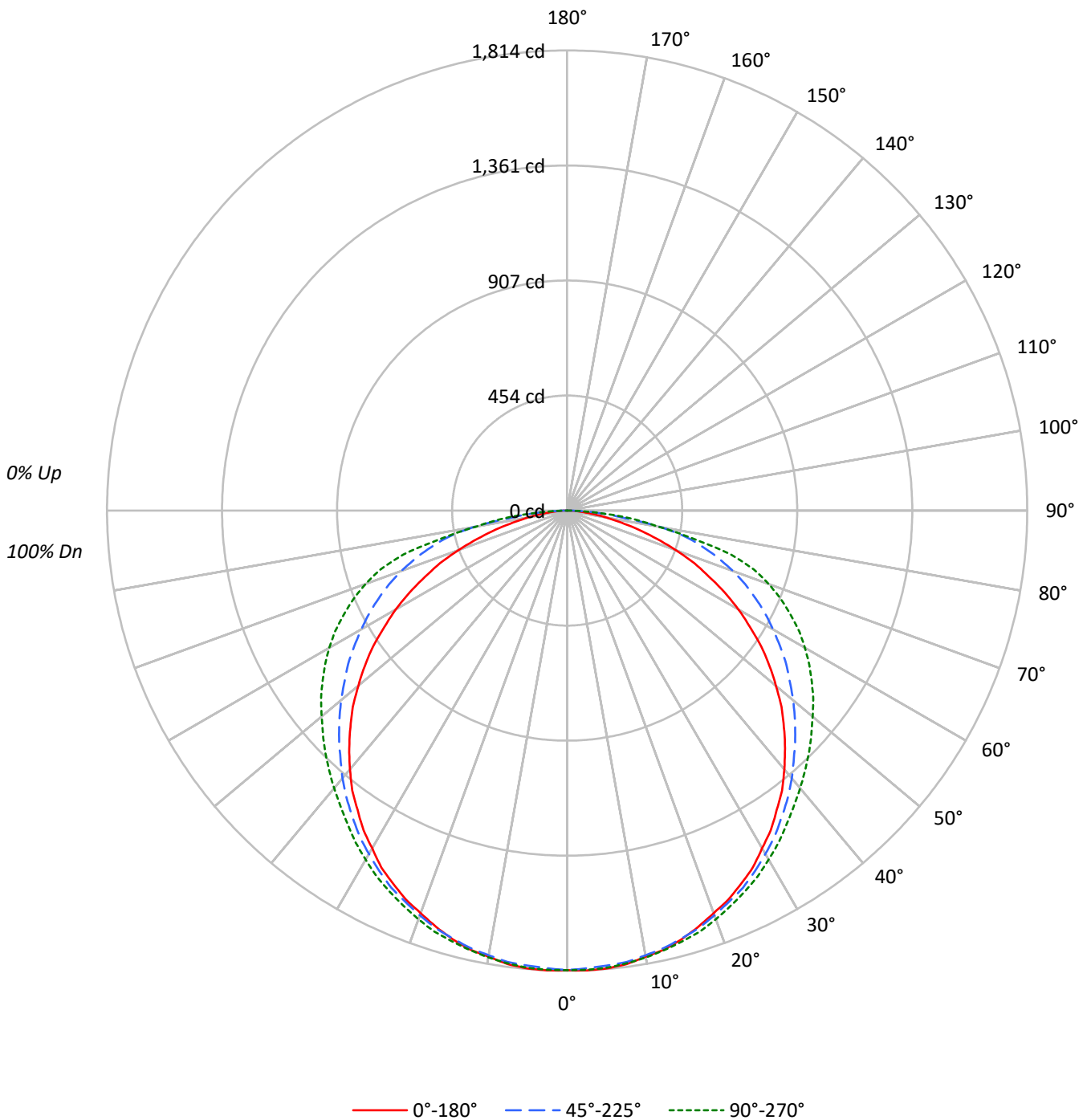
Lumens per Lamp: N/A  
Luminaire Lumens: 5760.8 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2437	2437	2437
5°	2447	2431	2443
10°	2440	2432	2444
15°	2436	2432	2448
20°	2418	2430	2455
25°	2409	2435	2460
30°	2388	2428	2468
35°	2365	2422	2478
40°	2339	2419	2509
45°	2300	2420	2566
50°	2249	2434	2644
55°	2192	2473	2762
60°	2099	2522	2914
65°	1965	2611	3093
70°	1787	2732	3327
75°	1515	2882	3476
80°	1196	2900	2812
85°	881	2206	2470



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.8	3.0
10°-20°	494.6	8.6
20°-30°	756.3	13.1
30°-40°	924.6	16.0
40°-50°	985.4	17.1
50°-60°	942.2	16.4
60°-70°	798.2	13.9
70°-80°	536.4	9.3
80°-90°	151.3	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°	1422.7	24.7
0°-40°	2347.3	40.7
0°-60°	4274.9	74.2
0°-90°	5760.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5760.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1812	1812	1812	1812	1812	
5°	1812	1809	1800	1809	1809	172
15°	1749	1749	1746	1760	1757	493
25°	1623	1629	1640	1654	1657	748
35°	1440	1452	1474	1503	1509	902
45°	1209	1229	1272	1326	1349	932
55°	934	969	1054	1137	1177	832
65°	617	680	820	929	972	613
75°	292	397	554	649	669	312
85°	57	117	143	154	160	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1811.6	1811.6	1811.6	1811.6	1811.6
2.5°	1814.5	1814.5	1805.9	1811.6	1811.6
5°	1811.6	1808.7	1800.2	1808.7	1808.7
7.5°	1803.0	1800.2	1794.5	1803.0	1800.2
10°	1785.9	1785.9	1780.2	1788.7	1788.7
12.5°	1771.6	1768.7	1765.9	1777.3	1774.5
15°	1748.7	1748.7	1745.9	1760.2	1757.3
17.5°	1720.2	1723.0	1725.9	1737.3	1740.2
20°	1688.7	1694.5	1697.3	1714.5	1714.5
22.5°	1660.2	1663.0	1668.7	1685.9	1685.9
25°	1623.0	1628.7	1640.2	1654.4	1657.3
27.5°	1585.9	1588.7	1603.0	1623.0	1625.9
30°	1537.3	1545.9	1563.0	1585.9	1588.7
32.5°	1494.4	1503.0	1523.0	1545.9	1551.6
35°	1440.1	1451.6	1474.4	1503.0	1508.7
37.5°	1391.6	1400.1	1428.7	1460.1	1468.7
40°	1331.6	1348.7	1377.3	1414.4	1428.7
42.5°	1271.6	1288.7	1323.0	1371.6	1388.7
45°	1208.7	1228.7	1271.6	1325.8	1348.7
47.5°	1145.8	1168.7	1217.3	1280.1	1305.8
50°	1074.4	1103.0	1163.0	1234.4	1263.0
52.5°	1005.8	1040.1	1105.8	1185.8	1223.0
55°	934.4	968.7	1054.4	1137.3	1177.3
57.5°	854.4	900.1	994.4	1088.7	1131.5
60°	780.1	822.9	937.2	1040.1	1083.0
62.5°	700.1	757.2	880.1	988.7	1031.5
65°	617.2	680.1	820.1	928.7	971.5
67.5°	542.9	611.5	760.1	868.7	911.5
70°	454.3	540.1	694.4	802.9	845.8
72.5°	371.5	465.8	625.8	731.5	771.5
75°	291.5	397.2	554.3	648.6	668.6
77.5°	217.2	328.6	480.0	520.1	505.8
80°	154.3	262.9	374.3	354.3	362.9
82.5°	100.0	200.0	231.5	262.9	271.5
85°	57.1	117.2	142.9	154.3	160.0
87.5°	25.7	42.9	57.1	57.1	54.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)