

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: P391706

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L935-CD1-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: P391706
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-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: 5833.2 lumens
Efficiency: N/A
Efficacy: 108.4 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

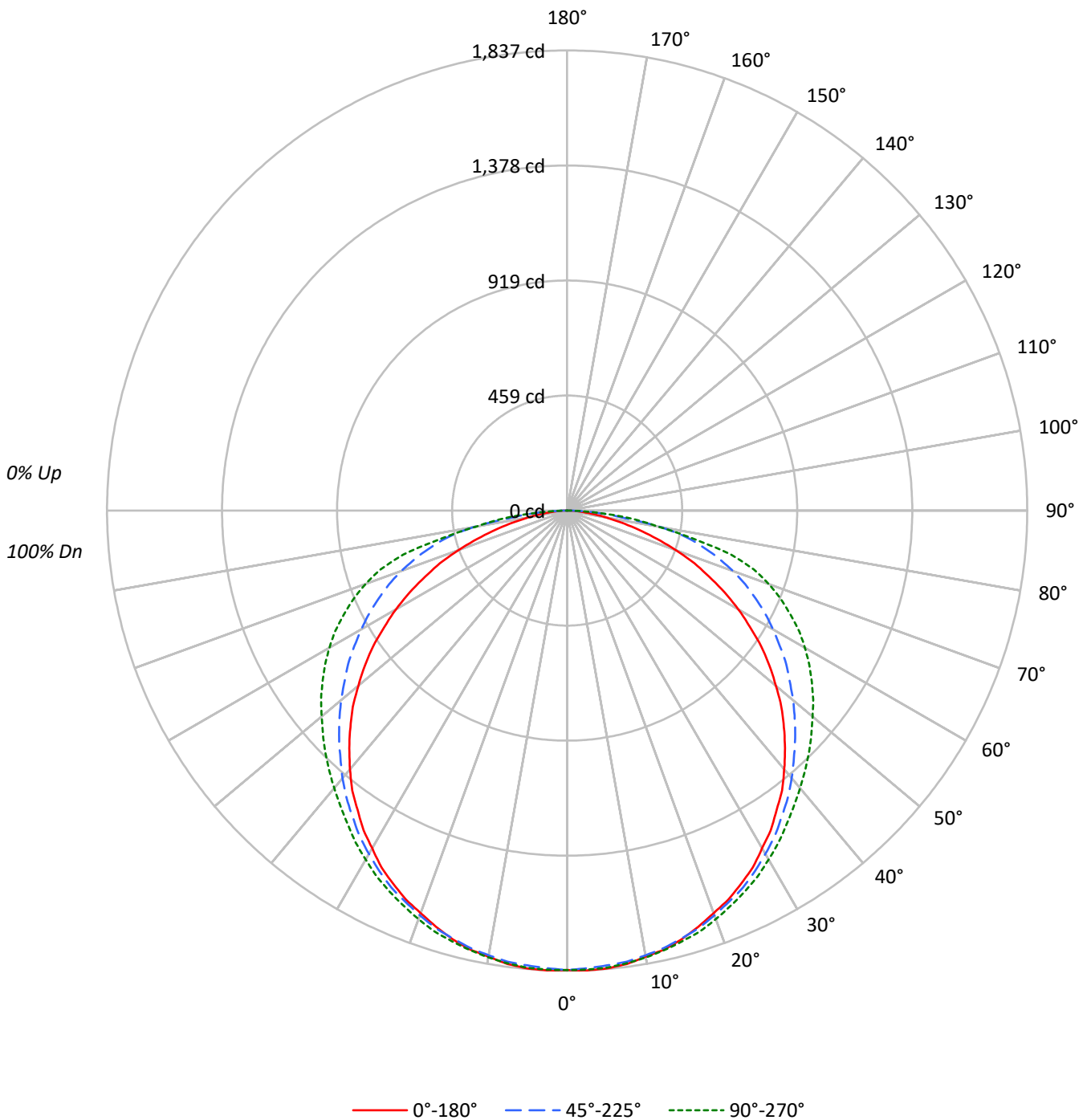
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2468	2468	2468
5°	2478	2462	2474
10°	2471	2463	2475
15°	2467	2462	2479
20°	2448	2461	2486
25°	2440	2466	2491
30°	2418	2459	2499
35°	2395	2452	2509
40°	2368	2449	2541
45°	2329	2450	2599
50°	2277	2465	2677
55°	2219	2504	2796
60°	2126	2554	2951
65°	1990	2644	3132
70°	1810	2766	3369
75°	1534	2918	3519
80°	1210	2937	2848
85°	894	2234	2501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.0	3.0
10°-20°	500.8	8.6
20°-30°	765.8	13.1
30°-40°	936.2	16.0
40°-50°	997.8	17.1
50°-60°	954.0	16.4
60°-70°	808.2	13.9
70°-80°	543.2	9.3
80°-90°	153.2	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°	1440.6	24.7
0°-40°	2376.8	40.7
0°-60°	4328.6	74.2
0°-90°	5833.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5833.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1834	1834	1834	1834	1834	
5°	1834	1832	1823	1832	1832	174
15°	1771	1771	1768	1782	1779	499
25°	1643	1649	1661	1675	1678	757
35°	1458	1470	1493	1522	1528	914
45°	1224	1244	1288	1342	1366	944
55°	946	981	1068	1152	1192	843
65°	625	689	830	940	984	620
75°	295	402	561	657	677	316
85°	58	119	145	156	162	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1834.4	1834.4	1834.4	1834.4	1834.4
2.5°	1837.3	1837.3	1828.6	1834.4	1834.4
5°	1834.4	1831.5	1822.8	1831.5	1831.5
7.5°	1825.7	1822.8	1817.0	1825.7	1822.8
10°	1808.3	1808.3	1802.5	1811.2	1811.2
12.5°	1793.9	1791.0	1788.1	1799.7	1796.8
15°	1770.7	1770.7	1767.8	1782.3	1779.4
17.5°	1741.8	1744.7	1747.6	1759.1	1762.0
20°	1710.0	1715.7	1718.6	1736.0	1736.0
22.5°	1681.0	1683.9	1689.7	1707.1	1707.1
25°	1643.4	1649.2	1660.8	1675.2	1678.1
27.5°	1605.8	1608.7	1623.2	1643.4	1646.3
30°	1556.6	1565.3	1582.7	1605.8	1608.7
32.5°	1513.2	1521.9	1542.1	1565.3	1571.1
35°	1458.2	1469.8	1493.0	1521.9	1527.7
37.5°	1409.1	1417.7	1446.7	1478.5	1487.2
40°	1348.3	1365.7	1394.6	1432.2	1446.7
42.5°	1287.5	1304.9	1339.6	1388.8	1406.2
45°	1223.9	1244.1	1287.5	1342.5	1365.7
47.5°	1160.2	1183.4	1232.6	1296.2	1322.3
50°	1087.9	1116.8	1177.6	1249.9	1278.9
52.5°	1018.5	1053.2	1119.7	1200.7	1238.3
55°	946.1	980.8	1067.6	1151.5	1192.1
57.5°	865.1	911.4	1006.9	1102.4	1145.8
60°	789.9	833.3	949.0	1053.2	1096.6
62.5°	708.9	766.7	891.1	1001.1	1044.5
65°	625.0	688.6	830.4	940.3	983.7
67.5°	549.7	619.2	769.6	879.6	923.0
70°	460.0	546.8	703.1	813.0	856.4
72.5°	376.1	471.6	633.6	740.7	781.2
75°	295.1	402.2	561.3	656.8	677.0
77.5°	219.9	332.7	486.1	526.6	512.1
80°	156.2	266.2	379.0	358.8	367.5
82.5°	101.3	202.5	234.4	266.2	274.9
85°	57.9	118.6	144.7	156.2	162.0
87.5°	26.0	43.4	57.9	57.9	55.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)