

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: P388924

Luminaire Tested: **24CZ2-65VHE-UNV-L940-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: P388924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65VHE-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5538.4 lumens
Efficiency: N/A
Efficacy: 131.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

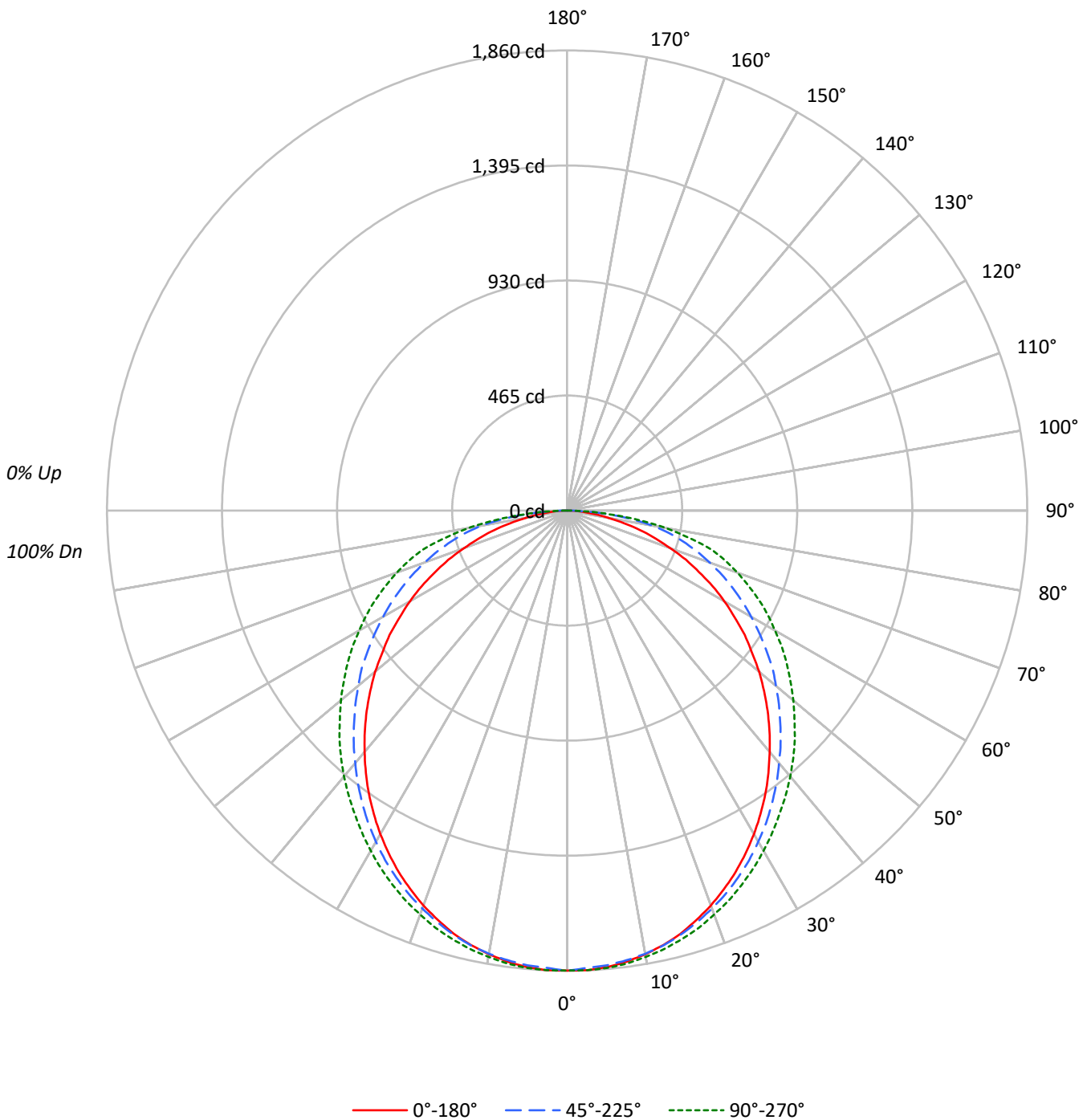
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2502	2502	2502
5°	2501	2492	2506
10°	2488	2485	2503
15°	2467	2472	2498
20°	2432	2451	2488
25°	2393	2428	2478
30°	2346	2401	2467
35°	2295	2371	2459
40°	2237	2341	2464
45°	2181	2318	2476
50°	2120	2306	2500
55°	2055	2302	2545
60°	1975	2313	2611
65°	1871	2348	2725
70°	1738	2407	2880
75°	1586	2527	3123
80°	1303	2721	3123
85°	999	2512	2683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.9	3.2
10°-20°	502.1	9.1
20°-30°	755.5	13.6
30°-40°	905.4	16.3
40°-50°	943.6	17.0
50°-60°	877.9	15.9
60°-70°	723.0	13.1
70°-80°	492.4	8.9
80°-90°	162.6	2.9
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°	1433.5	25.9
0°-40°	2338.9	42.2
0°-60°	4160.3	75.1
0°-90°	5538.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5538.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1852	1852	1845	1854	1856	176
15°	1771	1773	1774	1791	1793	499
25°	1612	1619	1636	1664	1669	742
35°	1397	1414	1444	1482	1497	873
45°	1146	1170	1218	1279	1301	884
55°	876	906	982	1059	1085	781
65°	588	638	738	824	856	583
75°	305	373	486	573	601	322
85°	65	126	163	174	174	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1859.5	1859.5	1859.5	1859.5	1859.5
2.5°	1859.5	1859.5	1850.3	1859.5	1859.5
5°	1852.1	1852.1	1844.7	1854.0	1855.8
7.5°	1839.2	1841.0	1833.6	1844.7	1846.6
10°	1820.7	1822.5	1818.8	1829.9	1831.8
12.5°	1798.5	1800.3	1800.3	1813.3	1815.1
15°	1770.8	1772.6	1774.5	1791.1	1793.0
17.5°	1735.7	1741.2	1744.9	1765.2	1768.9
20°	1698.7	1704.2	1711.6	1733.8	1737.5
22.5°	1656.2	1663.6	1676.5	1700.5	1706.1
25°	1611.8	1619.2	1635.8	1663.6	1669.1
27.5°	1561.9	1573.0	1593.3	1622.9	1630.3
30°	1510.1	1521.2	1545.3	1576.7	1587.8
32.5°	1454.7	1469.5	1497.2	1532.3	1543.4
35°	1397.4	1414.0	1443.6	1482.4	1497.2
37.5°	1336.4	1354.9	1390.0	1432.5	1451.0
40°	1273.6	1295.7	1332.7	1382.6	1402.9
42.5°	1210.7	1231.0	1277.2	1330.9	1353.0
45°	1146.0	1170.0	1218.1	1279.1	1301.3
47.5°	1079.5	1103.5	1160.8	1225.5	1245.8
50°	1012.9	1037.0	1101.7	1170.0	1194.1
52.5°	940.8	972.3	1046.2	1114.6	1138.6
55°	876.1	905.7	981.5	1059.1	1085.0
57.5°	802.2	837.3	920.5	1001.8	1029.6
60°	733.8	770.8	859.5	942.7	970.4
62.5°	663.6	704.2	798.5	883.5	915.0
65°	587.8	637.7	737.5	824.4	855.8
67.5°	519.4	571.2	676.5	765.2	793.0
70°	441.8	504.6	611.8	700.5	732.0
72.5°	375.2	438.1	550.8	637.7	669.1
75°	305.0	373.4	486.1	573.0	600.7
77.5°	234.7	310.5	423.3	489.8	499.1
80°	168.2	247.7	351.2	390.0	403.0
82.5°	118.3	190.4	258.8	284.7	292.0
85°	64.7	125.7	162.7	173.8	173.8
87.5°	27.7	53.6	64.7	66.5	68.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)