

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: P388923

Luminaire Tested: **24CZ2-65VHE-UNV-L940-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: P388923
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-SDWPD1-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: 5471.6 lumens
Efficiency: N/A
Efficacy: 129.7 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

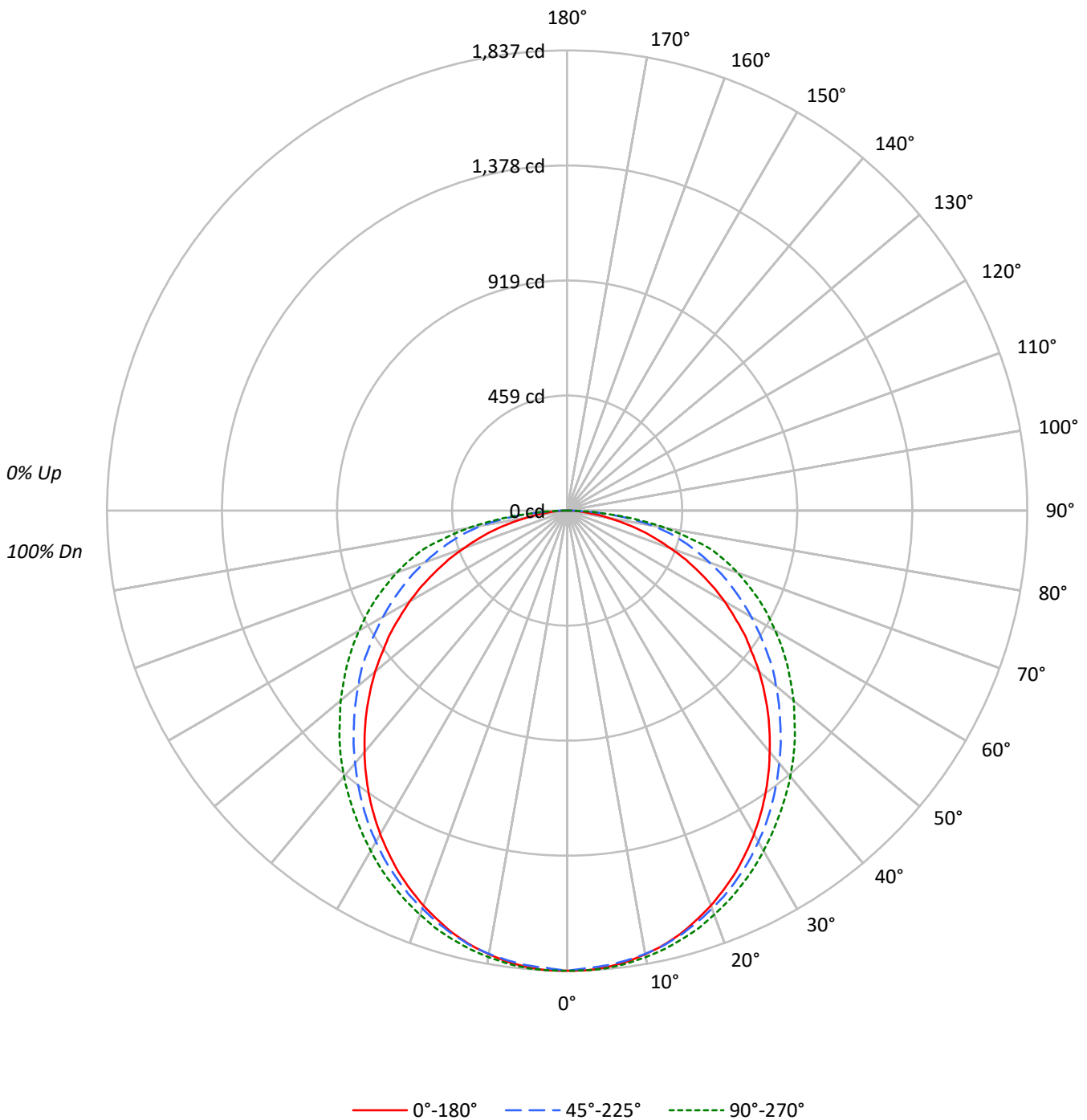
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388923

CATALOG NUMBER: 24CZ2-65VHE-UNV-L940-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388923

CATALOG NUMBER: 24CZ2-65VHE-UNV-L940-CD1-SDWPD1-U

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°	2472	2472	2472
5°	2471	2462	2476
10°	2457	2455	2472
15°	2437	2442	2467
20°	2403	2421	2458
25°	2364	2399	2448
30°	2318	2372	2437
35°	2268	2343	2430
40°	2210	2312	2434
45°	2154	2290	2446
50°	2095	2278	2469
55°	2031	2275	2514
60°	1951	2285	2580
65°	1849	2320	2692
70°	1717	2378	2845
75°	1566	2497	3085
80°	1288	2689	3085
85°	986	2481	2651



TEST NUMBER: P388923

CATALOG NUMBER: 24CZ2-65VHE-UNV-L940-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.7	3.2
10°-20°	496.0	9.1
20°-30°	746.4	13.6
30°-40°	894.5	16.3
40°-50°	932.2	17.0
50°-60°	867.3	15.9
60°-70°	714.3	13.1
70°-80°	486.5	8.9
80°-90°	160.6	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°	1416.2	25.9
0°-40°	2310.7	42.2
0°-60°	4110.2	75.1
0°-90°	5471.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5471.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1837	1837	1837	1837	1837	
5°	1830	1830	1822	1832	1833	174
15°	1749	1751	1753	1770	1771	493
25°	1592	1600	1616	1644	1649	733
35°	1380	1397	1426	1464	1479	863
45°	1132	1156	1203	1264	1286	873
55°	866	895	970	1046	1072	772
65°	581	630	729	814	846	576
75°	301	369	480	566	594	318
85°	64	124	161	172	172	79
90°	0	0	0	0	0	



TEST NUMBER: P388923

CATALOG NUMBER: 24CZ2-65VHE-UNV-L940-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1837.1	1837.1	1837.1	1837.1	1837.1
2.5°	1837.1	1837.1	1827.9	1837.1	1837.1
5°	1829.8	1829.8	1822.5	1831.6	1833.4
7.5°	1817.0	1818.8	1811.5	1822.5	1824.3
10°	1798.7	1800.5	1796.9	1807.9	1809.7
12.5°	1776.8	1778.6	1778.6	1791.4	1793.2
15°	1749.4	1751.2	1753.1	1769.5	1771.3
17.5°	1714.7	1720.2	1723.9	1743.9	1747.6
20°	1678.2	1683.7	1691.0	1712.9	1716.5
22.5°	1636.2	1643.5	1656.3	1680.0	1685.5
25°	1592.4	1599.7	1616.1	1643.5	1649.0
27.5°	1543.1	1554.0	1574.1	1603.3	1610.6
30°	1491.9	1502.9	1526.6	1557.7	1568.6
32.5°	1437.2	1451.8	1479.2	1513.8	1524.8
35°	1380.5	1397.0	1426.2	1464.5	1479.2
37.5°	1320.3	1338.5	1373.2	1415.2	1433.5
40°	1258.2	1280.1	1316.6	1365.9	1386.0
42.5°	1196.1	1216.2	1261.8	1314.8	1336.7
45°	1132.2	1155.9	1203.4	1263.7	1285.6
47.5°	1066.5	1090.2	1146.8	1210.7	1230.8
50°	1000.7	1024.4	1088.4	1155.9	1179.7
52.5°	929.5	960.5	1033.6	1101.1	1124.9
55°	865.6	894.8	969.7	1046.4	1071.9
57.5°	792.5	827.2	909.4	989.8	1017.1
60°	725.0	761.5	849.1	931.3	958.7
62.5°	655.6	695.7	788.9	872.9	903.9
65°	580.7	630.0	728.6	814.4	845.5
67.5°	513.1	564.3	668.4	756.0	783.4
70°	436.4	498.5	604.4	692.1	723.1
72.5°	370.7	432.8	544.2	630.0	661.1
75°	301.3	368.9	480.3	566.1	593.5
77.5°	231.9	306.8	418.2	483.9	493.1
80°	166.2	244.7	347.0	385.3	398.1
82.5°	116.9	188.1	255.7	281.2	288.5
85°	63.9	124.2	160.7	171.7	171.7
87.5°	27.4	53.0	63.9	65.7	67.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)