

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: P388921

Luminaire Tested: **24CZ2-65VHE-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: P388921
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-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5481.7 lumens
Efficiency: N/A
Efficacy: 129.9 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

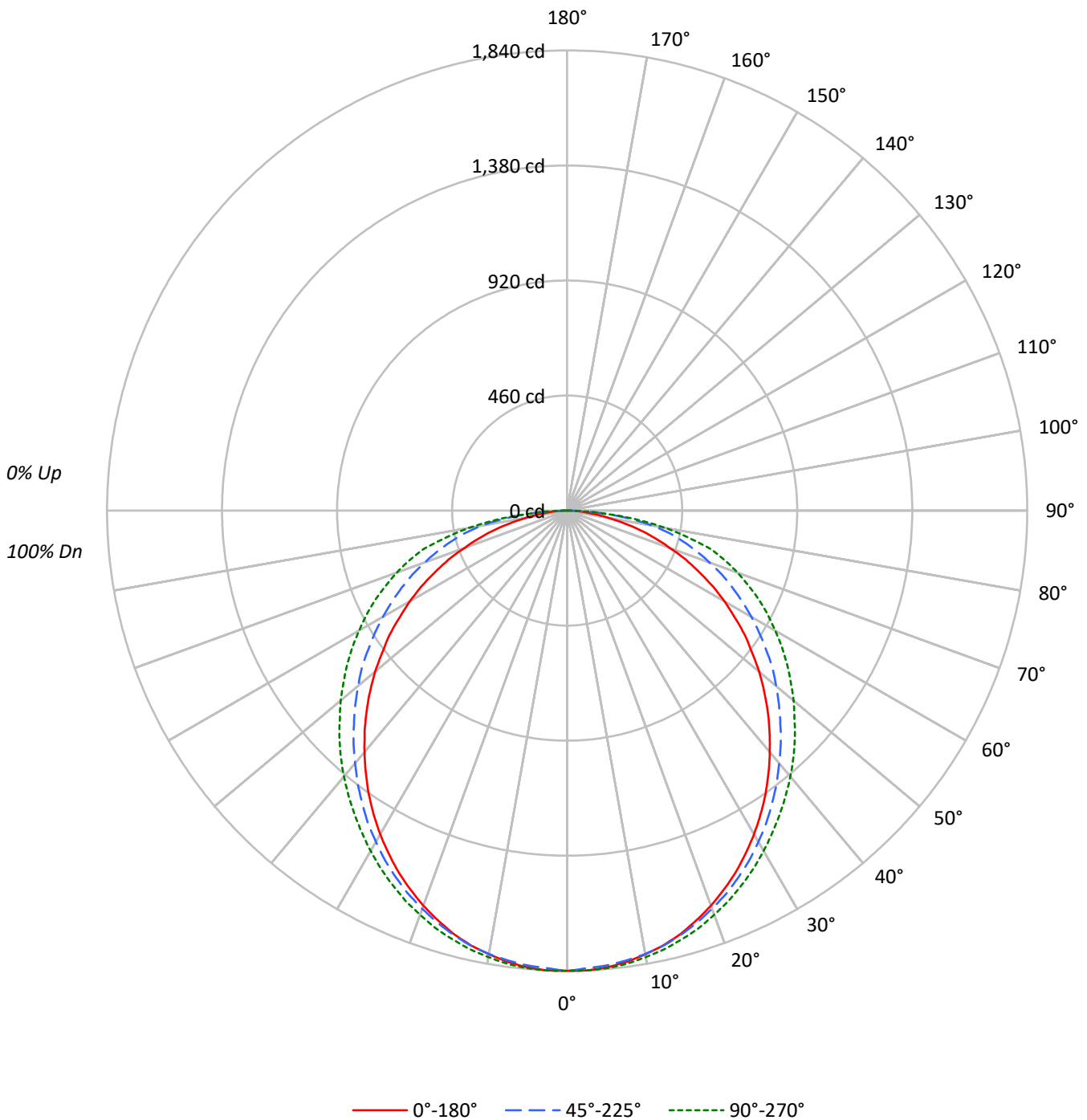
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2476	2476	2476
5°	2476	2466	2481
10°	2462	2460	2477
15°	2441	2446	2472
20°	2407	2426	2462
25°	2368	2404	2453
30°	2322	2376	2442
35°	2272	2347	2434
40°	2214	2317	2439
45°	2158	2294	2451
50°	2099	2282	2474
55°	2034	2279	2519
60°	1954	2289	2585
65°	1852	2324	2697
70°	1720	2382	2850
75°	1569	2502	3091
80°	1290	2693	3090
85°	988	2485	2655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.1	3.2
10°-20°	496.9	9.1
20°-30°	747.8	13.6
30°-40°	896.2	16.3
40°-50°	933.9	17.0
50°-60°	868.9	15.9
60°-70°	715.6	13.1
70°-80°	487.4	8.9
80°-90°	160.9	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°	1418.8	25.9
0°-40°	2315.0	42.2
0°-60°	4117.8	75.1
0°-90°	5481.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5481.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1840	1840	1840	1840	1840	
5°	1833	1833	1826	1835	1837	174
15°	1753	1754	1756	1773	1775	494
25°	1595	1603	1619	1646	1652	734
35°	1383	1400	1429	1467	1482	865
45°	1134	1158	1206	1266	1288	875
55°	867	896	972	1048	1074	773
65°	582	631	730	816	847	577
75°	302	370	481	567	595	318
85°	64	124	161	172	172	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1840.5	1840.5	1840.5	1840.5	1840.5
2.5°	1840.5	1840.5	1831.3	1840.5	1840.5
5°	1833.1	1833.1	1825.8	1835.0	1836.8
7.5°	1820.3	1822.2	1814.8	1825.8	1827.7
10°	1802.0	1803.9	1800.2	1811.2	1813.0
12.5°	1780.1	1781.9	1781.9	1794.7	1796.6
15°	1752.6	1754.5	1756.3	1772.8	1774.6
17.5°	1717.9	1723.4	1727.0	1747.2	1750.8
20°	1681.3	1686.8	1694.1	1716.1	1719.7
22.5°	1639.2	1646.5	1659.3	1683.1	1688.6
25°	1595.3	1602.6	1619.1	1646.5	1652.0
27.5°	1545.9	1556.9	1577.0	1606.3	1613.6
30°	1494.7	1505.7	1529.4	1560.6	1571.5
32.5°	1439.8	1454.4	1481.9	1516.6	1527.6
35°	1383.1	1399.6	1428.8	1467.2	1481.9
37.5°	1322.7	1341.0	1375.8	1417.9	1436.1
40°	1260.5	1282.5	1319.1	1368.5	1388.6
42.5°	1198.3	1218.4	1264.2	1317.2	1339.2
45°	1134.3	1158.1	1205.6	1266.0	1288.0
47.5°	1068.4	1092.2	1148.9	1212.9	1233.1
50°	1002.6	1026.3	1090.4	1158.1	1181.8
52.5°	931.2	962.3	1035.5	1103.2	1127.0
55°	867.2	896.4	971.5	1048.3	1073.9
57.5°	794.0	828.8	911.1	991.6	1019.0
60°	726.3	762.9	850.7	933.0	960.5
62.5°	656.8	697.0	790.3	874.5	905.6
65°	581.8	631.2	730.0	816.0	847.1
67.5°	514.1	565.3	669.6	757.4	784.8
70°	437.2	499.4	605.6	693.4	724.5
72.5°	371.4	433.6	545.2	631.2	662.3
75°	301.9	369.6	481.2	567.1	594.6
77.5°	232.3	307.4	419.0	484.8	494.0
80°	166.5	245.2	347.6	386.0	398.8
82.5°	117.1	188.4	256.1	281.7	289.1
85°	64.0	124.4	161.0	172.0	172.0
87.5°	27.4	53.1	64.0	65.9	67.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)