

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: P389860

Luminaire Tested: **24CZ2-65VHE-S-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: P389860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65VHE-S-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5819.4 lumens
Efficiency: N/A
Efficacy: 137.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

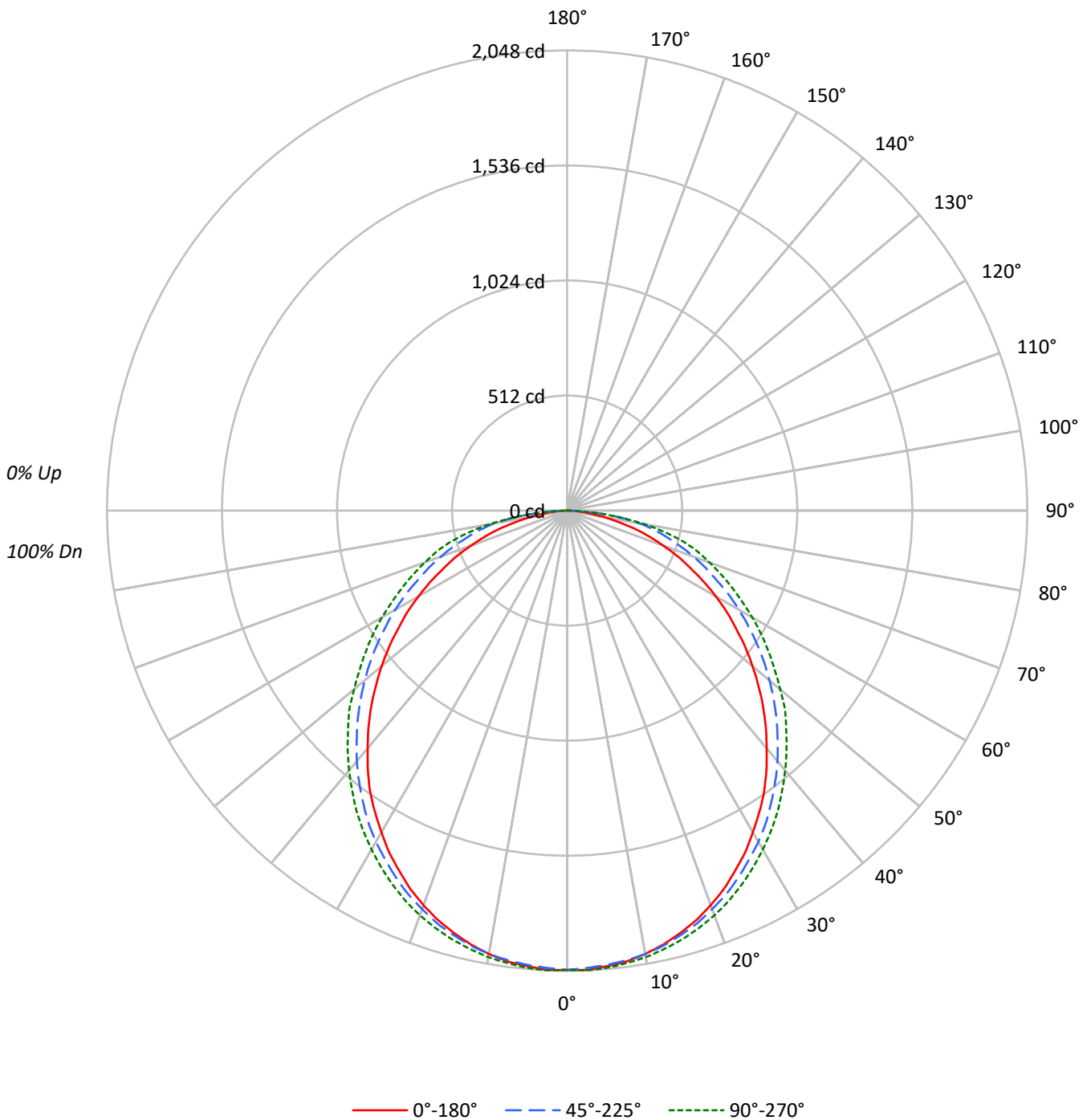
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2751	2751	2751
5°	2749	2741	2759
10°	2738	2738	2758
15°	2711	2724	2752
20°	2676	2702	2745
25°	2626	2676	2728
30°	2567	2645	2705
35°	2511	2602	2684
40°	2425	2558	2653
45°	2346	2508	2624
50°	2256	2461	2592
55°	2155	2415	2567
60°	2054	2378	2562
65°	1924	2336	2578
70°	1782	2349	2647
75°	1595	2393	2796
80°	1289	2535	2736
85°	969	2226	2169



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.5	3.3
10°-20°	553.0	9.5
20°-30°	831.3	14.3
30°-40°	990.2	17.0
40°-50°	1013.5	17.4
50°-60°	912.4	15.7
60°-70°	716.5	12.3
70°-80°	465.1	8.0
80°-90°	143.8	2.5
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°	1577.9	27.1
0°-40°	2568.1	44.1
0°-60°	4494.0	77.2
0°-90°	5819.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5819.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2044	2044	2044	2044	2044	
5°	2035	2039	2030	2041	2042	193
15°	1946	1952	1956	1972	1976	549
25°	1769	1784	1802	1832	1837	815
35°	1529	1547	1584	1623	1634	954
45°	1233	1262	1318	1368	1379	951
55°	919	959	1030	1083	1094	824
65°	604	651	734	795	810	602
75°	307	366	460	523	538	325
85°	63	116	144	140	140	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2044.4	2044.4	2044.4	2044.4	2044.4
2.5°	2046.2	2046.2	2037.0	2046.2	2048.1
5°	2035.2	2038.8	2029.6	2040.7	2042.5
7.5°	2024.1	2024.1	2018.5	2029.6	2031.5
10°	2003.7	2005.6	2003.7	2016.7	2018.5
12.5°	1977.8	1981.5	1983.4	1996.3	1998.2
15°	1946.4	1952.0	1955.7	1972.3	1976.0
17.5°	1911.3	1916.8	1926.1	1944.6	1948.3
20°	1868.8	1876.2	1887.3	1911.3	1916.8
22.5°	1822.6	1830.0	1848.5	1870.6	1879.9
25°	1769.0	1783.8	1802.2	1831.8	1837.4
27.5°	1715.4	1728.3	1752.3	1783.8	1791.2
30°	1652.5	1672.9	1702.4	1733.9	1741.2
32.5°	1591.5	1611.9	1647.0	1680.2	1689.5
35°	1528.7	1547.2	1584.1	1622.9	1634.0
37.5°	1456.6	1480.6	1521.3	1560.1	1571.2
40°	1380.8	1410.4	1456.6	1497.3	1510.2
42.5°	1308.7	1340.1	1386.3	1430.7	1445.5
45°	1232.9	1262.5	1317.9	1367.9	1378.9
47.5°	1155.3	1188.6	1247.7	1297.6	1316.1
50°	1077.7	1112.8	1175.6	1227.4	1238.5
52.5°	1000.0	1037.0	1103.5	1159.0	1164.5
55°	918.7	959.3	1029.6	1083.2	1094.3
57.5°	844.7	879.9	955.7	1011.1	1024.0
60°	763.4	802.2	883.6	935.3	952.0
62.5°	685.8	726.4	811.5	863.2	878.0
65°	604.4	650.7	733.8	794.8	809.6
67.5°	534.2	578.6	667.3	726.4	741.2
70°	452.9	502.8	597.1	658.1	672.8
72.5°	382.6	434.4	528.7	587.8	610.0
75°	306.8	366.0	460.3	523.1	537.9
77.5°	232.9	301.3	397.4	445.5	445.5
80°	166.4	238.5	327.2	349.4	353.1
82.5°	109.1	179.3	242.1	240.3	240.3
85°	62.8	116.5	144.2	140.5	140.5
87.5°	24.0	48.1	51.8	51.8	49.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)