

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: P391562

Luminaire Tested: **24CZ2-65VHE-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: P391562
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: 24CZ2-65VHE-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: 4711.5 lumens
Efficiency: N/A
Efficacy: 111.6 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

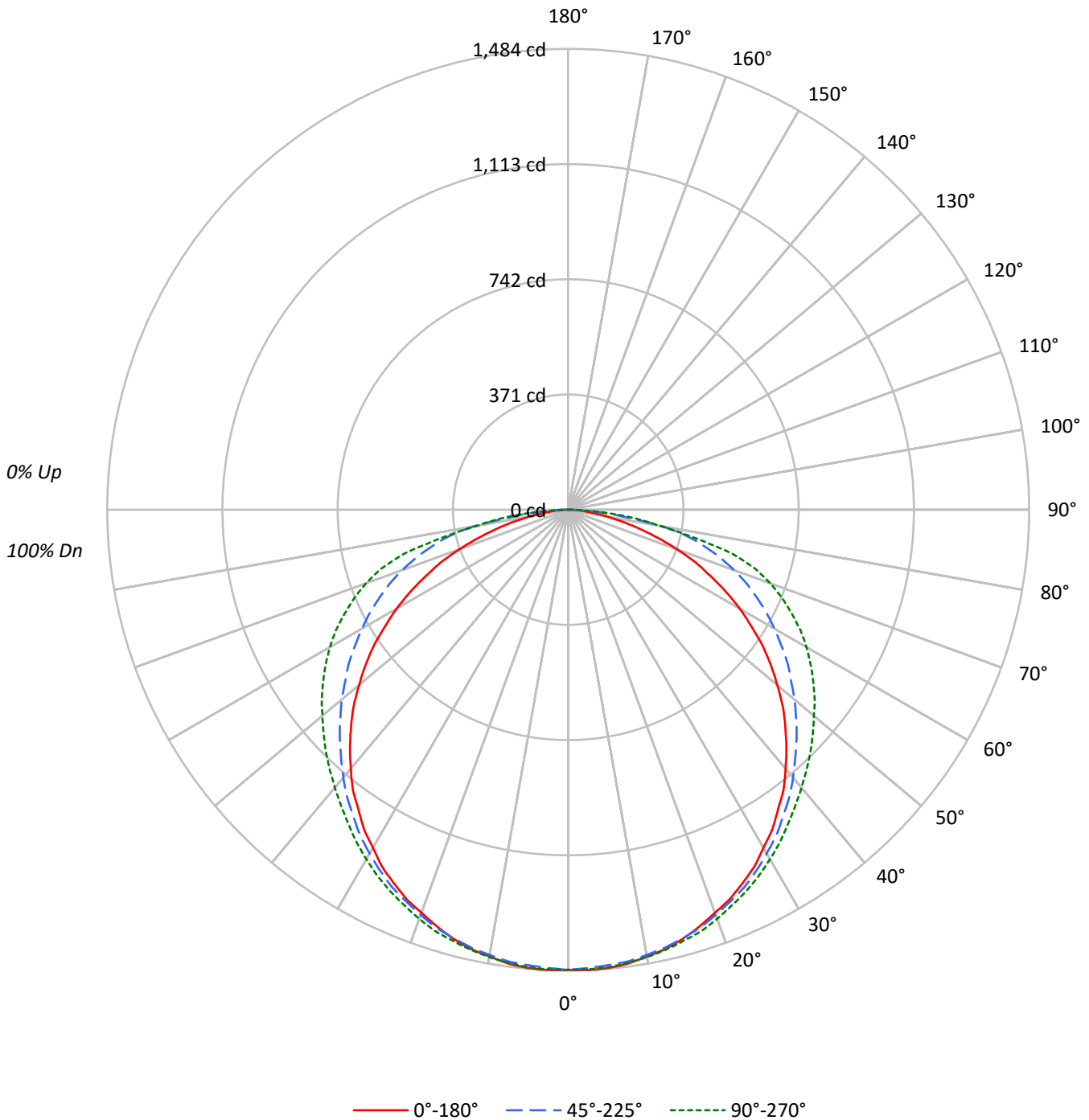
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1993	1993	1993
5°	2001	1989	1998
10°	1996	1989	1999
15°	1992	1989	2002
20°	1978	1988	2008
25°	1971	1991	2012
30°	1953	1986	2019
35°	1935	1981	2027
40°	1913	1978	2052
45°	1881	1979	2099
50°	1839	1991	2162
55°	1793	2023	2259
60°	1717	2063	2383
65°	1607	2135	2530
70°	1462	2234	2721
75°	1239	2357	2843
80°	978	2372	2300
85°	721	1803	2021



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	3.0
10°-20°	404.5	8.6
20°-30°	618.6	13.1
30°-40°	756.2	16.0
40°-50°	805.9	17.1
50°-60°	770.6	16.4
60°-70°	652.8	13.9
70°-80°	438.7	9.3
80°-90°	123.7	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°	1163.6	24.7
0°-40°	1919.8	40.7
0°-60°	3496.2	74.2
0°-90°	4711.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4711.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1482	1479	1472	1479	1479	141
15°	1430	1430	1428	1440	1437	403
25°	1327	1332	1341	1353	1355	612
35°	1178	1187	1206	1229	1234	738
45°	988	1005	1040	1084	1103	762
55°	764	792	862	930	963	681
65°	505	556	671	760	795	501
75°	238	325	453	530	547	255
85°	47	96	117	126	131	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1481.6	1481.6	1481.6	1481.6	1481.6
2.5°	1484.0	1484.0	1477.0	1481.6	1481.6
5°	1481.6	1479.3	1472.3	1479.3	1479.3
7.5°	1474.6	1472.3	1467.6	1474.6	1472.3
10°	1460.6	1460.6	1455.9	1462.9	1462.9
12.5°	1448.9	1446.6	1444.2	1453.6	1451.3
15°	1430.2	1430.2	1427.9	1439.6	1437.2
17.5°	1406.8	1409.2	1411.5	1420.9	1423.2
20°	1381.1	1385.8	1388.2	1402.2	1402.2
22.5°	1357.8	1360.1	1364.8	1378.8	1378.8
25°	1327.4	1332.1	1341.4	1353.1	1355.4
27.5°	1297.0	1299.3	1311.0	1327.4	1329.7
30°	1257.3	1264.3	1278.3	1297.0	1299.3
32.5°	1222.2	1229.2	1245.6	1264.3	1269.0
35°	1177.8	1187.2	1205.9	1229.2	1233.9
37.5°	1138.1	1145.1	1168.5	1194.2	1201.2
40°	1089.0	1103.0	1126.4	1156.8	1168.5
42.5°	1039.9	1054.0	1082.0	1121.7	1135.8
45°	988.5	1004.9	1039.9	1084.3	1103.0
47.5°	937.1	955.8	995.5	1047.0	1068.0
50°	878.7	902.1	951.1	1009.6	1032.9
52.5°	822.6	850.7	904.4	969.8	1000.2
55°	764.2	792.2	862.3	930.1	962.8
57.5°	698.8	736.1	813.3	890.4	925.4
60°	638.0	673.0	766.5	850.7	885.7
62.5°	572.6	619.3	719.8	808.6	843.6
65°	504.8	556.2	670.7	759.5	794.6
67.5°	444.0	500.1	621.6	710.4	745.5
70°	371.6	441.7	567.9	656.7	691.7
72.5°	303.8	380.9	511.8	598.3	631.0
75°	238.4	324.8	453.4	530.5	546.8
77.5°	177.6	268.8	392.6	425.3	413.6
80°	126.2	215.0	306.1	289.8	296.8
82.5°	81.8	163.6	189.3	215.0	222.0
85°	46.7	95.8	116.8	126.2	130.9
87.5°	21.0	35.1	46.7	46.7	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)