

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: P391322

Luminaire Tested: **24CZ2-40VHE-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: P391322
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: 24CZ2-40VHE-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: 2900.8 lumens
Efficiency: N/A
Efficacy: 110.7 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

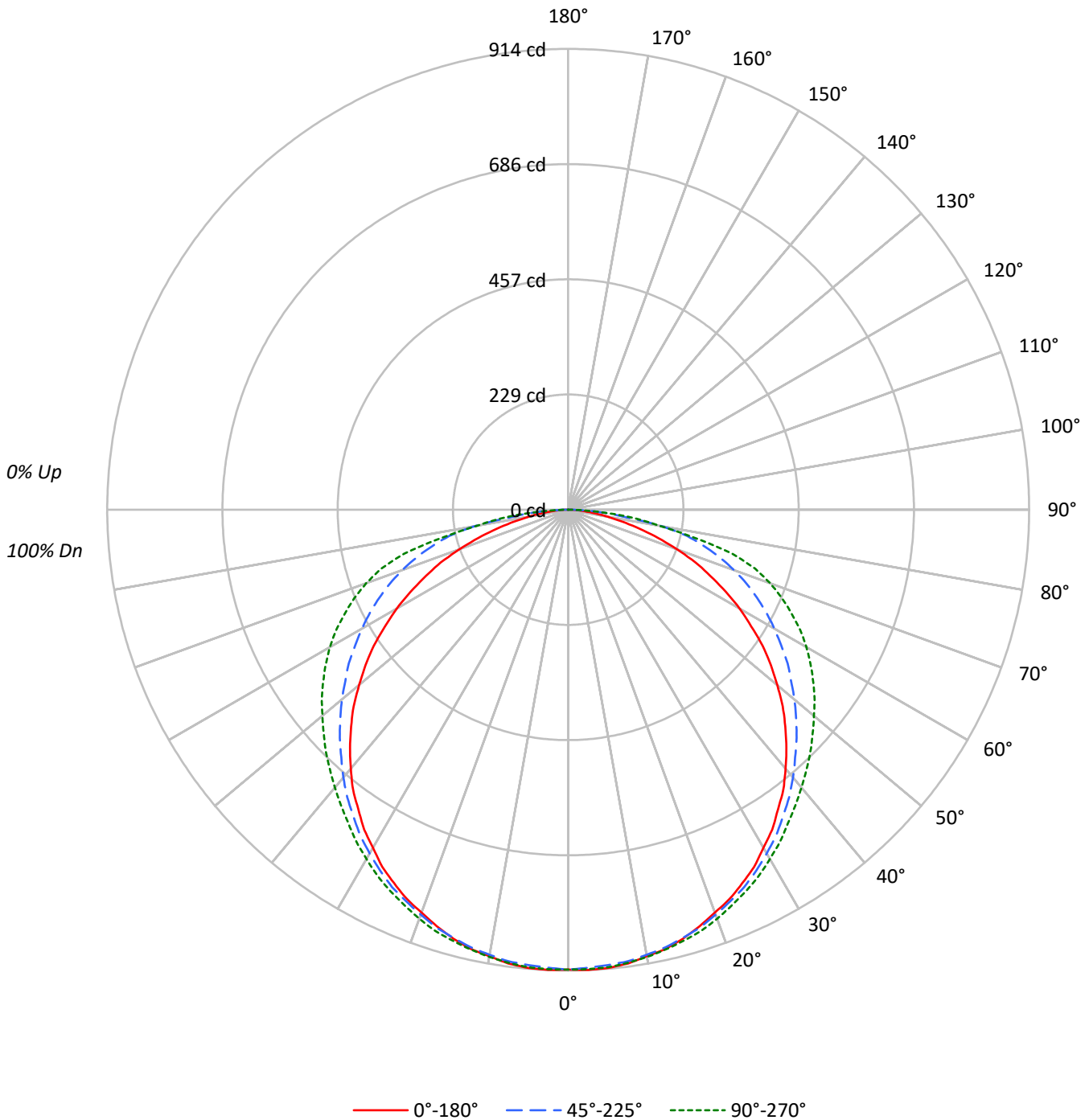
Input Watts (W): 26.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391322

CATALOG NUMBER: 24CZ2-40VHE-HRP-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P391322

CATALOG NUMBER: 24CZ2-40VHE-HRP-UNV-L935-CD1-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	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°	1227	1227	1227
5°	1232	1224	1230
10°	1229	1225	1231
15°	1227	1225	1233
20°	1217	1224	1236
25°	1213	1226	1239
30°	1203	1223	1243
35°	1191	1219	1248
40°	1178	1218	1264
45°	1158	1218	1292
50°	1132	1226	1331
55°	1104	1245	1391
60°	1057	1270	1467
65°	989	1315	1557
70°	900	1375	1675
75°	763	1451	1750
80°	602	1461	1416
85°	445	1110	1244



TEST NUMBER: P391322

CATALOG NUMBER: 24CZ2-40VHE-HRP-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.5	3.0
10°-20°	249.0	8.6
20°-30°	380.8	13.1
30°-40°	465.6	16.0
40°-50°	496.2	17.1
50°-60°	474.4	16.4
60°-70°	401.9	13.9
70°-80°	270.1	9.3
80°-90°	76.2	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°	716.4	24.7
0°-40°	1182.0	40.7
0°-60°	2152.6	74.2
0°-90°	2900.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2900.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	912	911	906	911	911	87
15°	881	881	879	886	885	248
25°	817	820	826	833	834	377
35°	725	731	742	757	760	454
45°	609	619	640	668	679	469
55°	470	488	531	573	593	419
65°	311	342	413	468	489	309
75°	147	200	279	327	337	157
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



TEST NUMBER: P391322

CATALOG NUMBER: 24CZ2-40VHE-HRP-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.2	912.2	912.2	912.2	912.2
2.5°	913.7	913.7	909.3	912.2	912.2
5°	912.2	910.8	906.5	910.8	910.8
7.5°	907.9	906.5	903.6	907.9	906.5
10°	899.3	899.3	896.4	900.7	900.7
12.5°	892.1	890.6	889.2	895.0	893.5
15°	880.6	880.6	879.1	886.3	884.9
17.5°	866.2	867.6	869.1	874.8	876.2
20°	850.3	853.2	854.7	863.3	863.3
22.5°	836.0	837.4	840.3	848.9	848.9
25°	817.3	820.1	825.9	833.1	834.5
27.5°	798.6	800.0	807.2	817.3	818.7
30°	774.1	778.4	787.0	798.6	800.0
32.5°	752.5	756.8	766.9	778.4	781.3
35°	725.2	730.9	742.4	756.8	759.7
37.5°	700.7	705.0	719.4	735.2	739.6
40°	670.5	679.1	693.5	712.2	719.4
42.5°	640.3	648.9	666.2	690.6	699.3
45°	608.6	618.7	640.3	667.6	679.1
47.5°	577.0	588.5	612.9	644.6	657.5
50°	541.0	555.4	585.6	621.6	636.0
52.5°	506.5	523.7	556.8	597.1	615.8
55°	470.5	487.8	530.9	572.7	592.8
57.5°	430.2	453.2	500.7	548.2	569.8
60°	392.8	414.4	471.9	523.7	545.3
62.5°	352.5	381.3	443.2	497.8	519.4
65°	310.8	342.4	412.9	467.6	489.2
67.5°	273.4	307.9	382.7	437.4	459.0
70°	228.8	271.9	349.6	404.3	425.9
72.5°	187.0	234.5	315.1	368.3	388.5
75°	146.8	200.0	279.1	326.6	336.7
77.5°	109.4	165.5	241.7	261.9	254.7
80°	77.7	132.4	188.5	178.4	182.7
82.5°	50.4	100.7	116.5	132.4	136.7
85°	28.8	59.0	71.9	77.7	80.6
87.5°	12.9	21.6	28.8	28.8	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)