

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: P391372

Luminaire Tested: **24CZ2-45VHE-HRP-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: P391372
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: 24CZ2-45VHE-HRP-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3264.7 lumens
Efficiency: N/A
Efficacy: 110.3 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

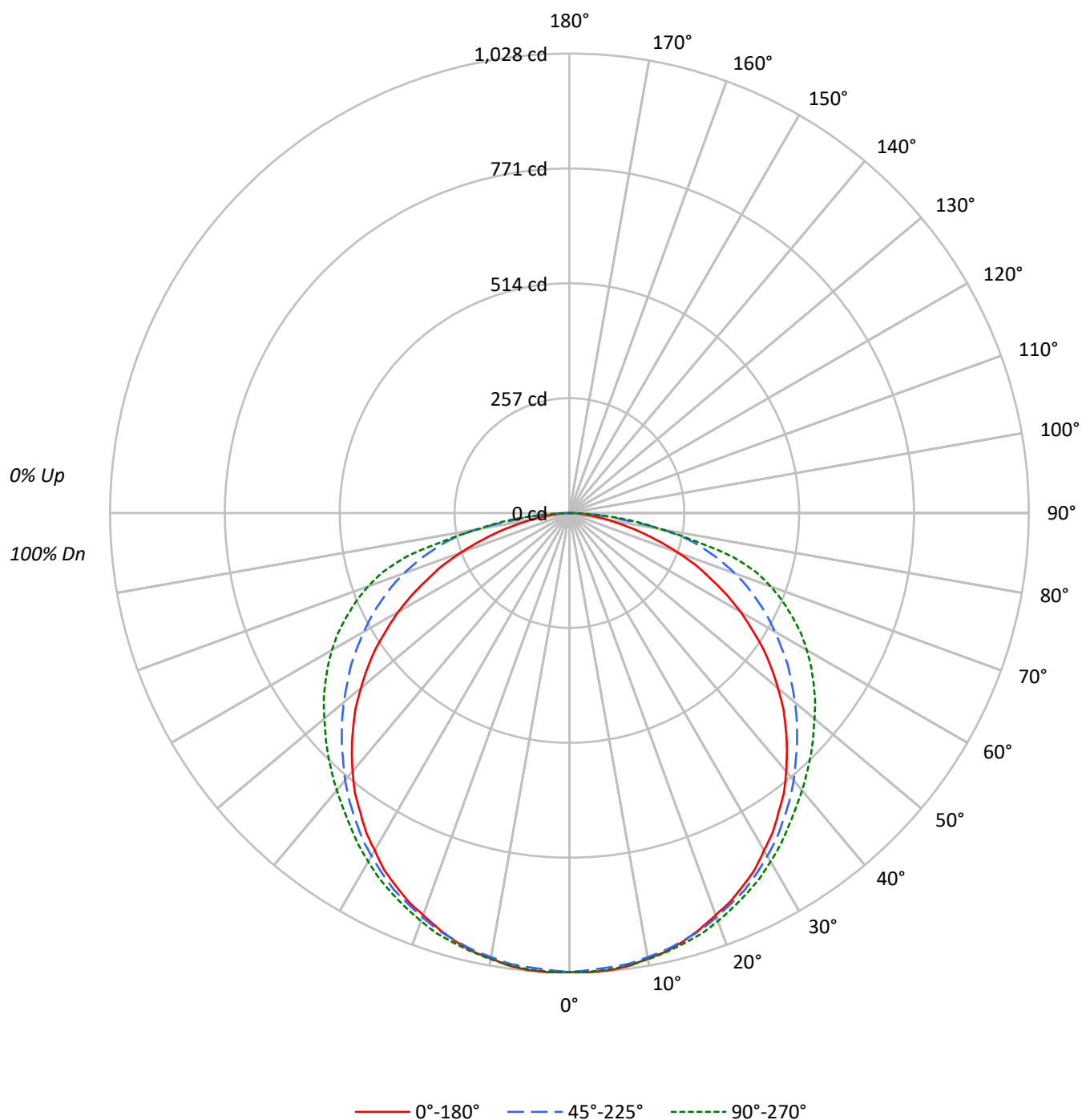
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391372

CATALOG NUMBER: 24CZ2-45VHE-HRP-UNV-L940-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P391372

CATALOG NUMBER: 24CZ2-45VHE-HRP-UNV-L940-CD1-SWPD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1381	1381	1381
5°	1387	1378	1384
10°	1383	1378	1385
15°	1380	1378	1387
20°	1370	1377	1391
25°	1366	1380	1394
30°	1354	1376	1399
35°	1340	1373	1404
40°	1325	1371	1422
45°	1303	1371	1454
50°	1275	1380	1498
55°	1242	1402	1565
60°	1190	1429	1651
65°	1114	1479	1753
70°	1013	1548	1886
75°	859	1633	1970
80°	677	1643	1594
85°	500	1250	1400



TEST NUMBER: P391372

CATALOG NUMBER: 24CZ2-45VHE-HRP-UNV-L940-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	3.0
10°-20°	280.3	8.6
20°-30°	428.6	13.1
30°-40°	524.0	16.0
40°-50°	558.4	17.1
50°-60°	534.0	16.4
60°-70°	452.3	13.9
70°-80°	304.0	9.3
80°-90°	85.8	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°	806.3	24.7
0°-40°	1330.3	40.7
0°-60°	2422.6	74.2
0°-90°	3264.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3264.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1027	1027	1027	1027	1027	
5°	1027	1025	1020	1025	1025	98
15°	991	991	989	998	996	279
25°	920	923	930	938	939	424
35°	816	823	836	852	855	511
45°	685	696	721	751	764	528
55°	530	549	598	644	667	472
65°	350	385	465	526	551	347
75°	165	225	314	368	379	177
85°	32	66	81	87	91	40
90°	0	0	0	0	0	



TEST NUMBER: P391372

CATALOG NUMBER: 24CZ2-45VHE-HRP-UNV-L940-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1026.7	1026.7	1026.7	1026.7	1026.7
2.5°	1028.3	1028.3	1023.4	1026.7	1026.7
5°	1026.7	1025.0	1020.2	1025.0	1025.0
7.5°	1021.8	1020.2	1016.9	1021.8	1020.2
10°	1012.1	1012.1	1008.8	1013.7	1013.7
12.5°	1004.0	1002.4	1000.7	1007.2	1005.6
15°	991.0	991.0	989.4	997.5	995.9
17.5°	974.8	976.5	978.1	984.6	986.2
20°	957.0	960.3	961.9	971.6	971.6
22.5°	940.8	942.4	945.7	955.4	955.4
25°	919.8	923.0	929.5	937.6	939.2
27.5°	898.7	900.3	908.4	919.8	921.4
30°	871.2	876.1	885.8	898.7	900.3
32.5°	846.9	851.8	863.1	876.1	879.3
35°	816.1	822.6	835.6	851.8	855.0
37.5°	788.6	793.5	809.7	827.5	832.3
40°	754.6	764.3	780.5	801.6	809.7
42.5°	720.6	730.3	749.7	777.3	787.0
45°	685.0	696.3	720.6	751.4	764.3
47.5°	649.4	662.3	689.8	725.5	740.0
50°	608.9	625.1	659.1	699.6	715.7
52.5°	570.0	589.4	626.7	672.0	693.1
55°	529.5	549.0	597.5	644.5	667.2
57.5°	484.2	510.1	563.5	617.0	641.3
60°	442.1	466.4	531.1	589.4	613.7
62.5°	396.7	429.1	498.8	560.3	584.6
65°	349.8	385.4	464.7	526.3	550.6
67.5°	307.7	346.5	430.7	492.3	516.6
70°	257.5	306.1	393.5	455.0	479.3
72.5°	210.5	264.0	354.6	414.5	437.2
75°	165.2	225.1	314.1	367.6	378.9
77.5°	123.1	186.2	272.0	294.7	286.6
80°	87.4	149.0	212.1	200.8	205.7
82.5°	56.7	113.4	131.2	149.0	153.8
85°	32.4	66.4	81.0	87.4	90.7
87.5°	14.6	24.3	32.4	32.4	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)