

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: P389548

Luminaire Tested: **24CZ2-110VHE-S-UNV-L940-CD2-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: P389548
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: 24CZ2-110VHE-S-UNV-L940-CD2-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: 9837.6 lumens
Efficiency: N/A
Efficacy: 127.1 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

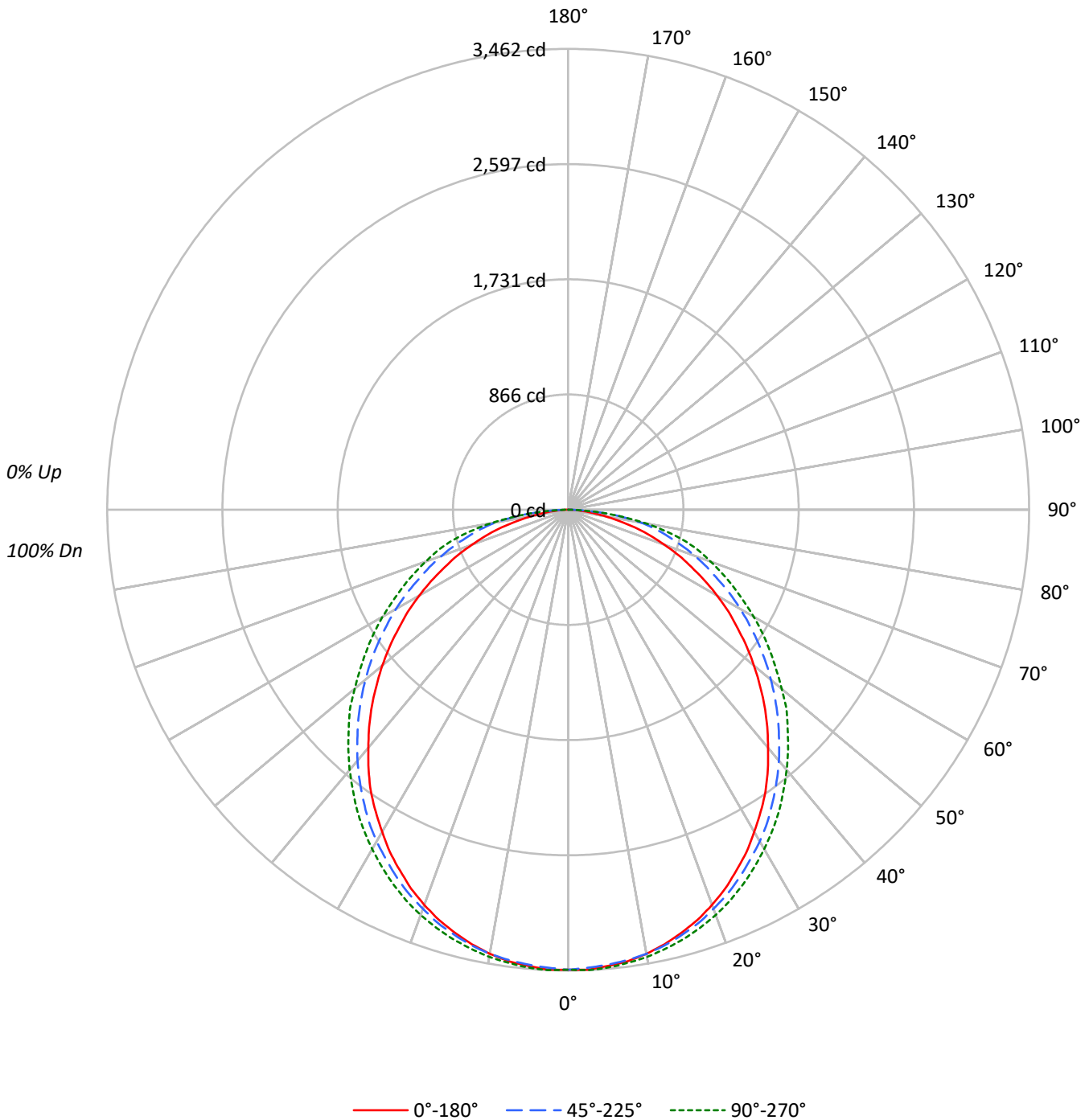
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389548

CATALOG NUMBER: 24CZ2-110VHE-S-UNV-L940-CD2-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389548

CATALOG NUMBER: 24CZ2-110VHE-S-UNV-L940-CD2-SWPD1-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	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°	4650	4650	4650
5°	4647	4634	4664
10°	4628	4628	4662
15°	4583	4605	4653
20°	4523	4568	4640
25°	4439	4523	4611
30°	4340	4471	4573
35°	4245	4399	4537
40°	4100	4325	4484
45°	3966	4239	4436
50°	3813	4160	4382
55°	3643	4083	4339
60°	3473	4019	4331
65°	3253	3949	4358
70°	3012	3971	4474
75°	2696	4045	4727
80°	2179	4286	4624
85°	1639	3762	3666



TEST NUMBER: P389548

CATALOG NUMBER: 24CZ2-110VHE-S-UNV-L940-CD2-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.2	3.3
10°-20°	934.9	9.5
20°-30°	1405.3	14.3
30°-40°	1674.0	17.0
40°-50°	1713.2	17.4
50°-60°	1542.4	15.7
60°-70°	1211.3	12.3
70°-80°	786.1	8.0
80°-90°	243.1	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°	2667.4	27.1
0°-40°	4341.4	44.1
0°-60°	7597.0	77.2
0°-90°	9837.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9837.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3456	3456	3456	3456	3456	
5°	3440	3447	3431	3450	3453	327
15°	3290	3300	3306	3334	3340	928
25°	2990	3015	3047	3097	3106	1378
35°	2584	2615	2678	2744	2762	1612
45°	2084	2134	2228	2312	2331	1607
55°	1553	1622	1740	1831	1850	1392
65°	1022	1100	1240	1344	1369	1017
75°	519	619	778	884	909	549
85°	106	197	244	238	238	128
90°	0	0	0	0	0	



TEST NUMBER: P389548

CATALOG NUMBER: 24CZ2-110VHE-S-UNV-L940-CD2-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3456.0	3456.0	3456.0	3456.0	3456.0
2.5°	3459.1	3459.1	3443.5	3459.1	3462.3
5°	3440.4	3446.6	3431.0	3449.8	3452.9
7.5°	3421.6	3421.6	3412.3	3431.0	3434.1
10°	3387.3	3390.4	3387.3	3409.1	3412.3
12.5°	3343.5	3349.8	3352.9	3374.8	3377.9
15°	3290.4	3299.8	3306.0	3334.1	3340.4
17.5°	3231.0	3240.4	3256.0	3287.3	3293.5
20°	3159.2	3171.7	3190.4	3231.0	3240.4
22.5°	3081.0	3093.5	3124.8	3162.3	3177.9
25°	2990.4	3015.4	3046.7	3096.7	3106.0
27.5°	2899.8	2921.7	2962.3	3015.4	3027.9
30°	2793.6	2827.9	2877.9	2931.0	2943.5
32.5°	2690.4	2724.8	2784.2	2840.4	2856.1
35°	2584.2	2615.4	2677.9	2743.6	2762.3
37.5°	2462.3	2503.0	2571.7	2637.3	2656.1
40°	2334.2	2384.2	2462.3	2531.1	2553.0
42.5°	2212.3	2265.5	2343.6	2418.6	2443.6
45°	2084.2	2134.2	2228.0	2312.3	2331.1
47.5°	1953.0	2009.2	2109.2	2193.6	2224.8
50°	1821.8	1881.1	1987.4	2074.9	2093.6
52.5°	1690.5	1753.0	1865.5	1959.2	1968.6
55°	1553.0	1621.8	1740.5	1831.1	1849.9
57.5°	1428.0	1487.4	1615.5	1709.3	1731.1
60°	1290.5	1356.2	1493.6	1581.1	1609.3
62.5°	1159.3	1228.0	1371.8	1459.3	1484.3
65°	1021.8	1099.9	1240.5	1343.7	1368.7
67.5°	903.1	978.1	1128.0	1228.0	1253.0
70°	765.6	849.9	1009.3	1112.4	1137.4
72.5°	646.8	734.3	893.7	993.7	1031.2
75°	518.7	618.7	778.1	884.3	909.3
77.5°	393.7	509.3	671.8	753.1	753.1
80°	281.2	403.1	553.1	590.6	596.8
82.5°	184.4	303.1	409.3	406.2	406.2
85°	106.2	196.9	243.7	237.5	237.5
87.5°	40.6	81.2	87.5	87.5	84.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)