

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: P388304

Luminaire Tested: **24CZ2-100VHE-SQR-UNV-L940-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: P388304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-100VHE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8360.5 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

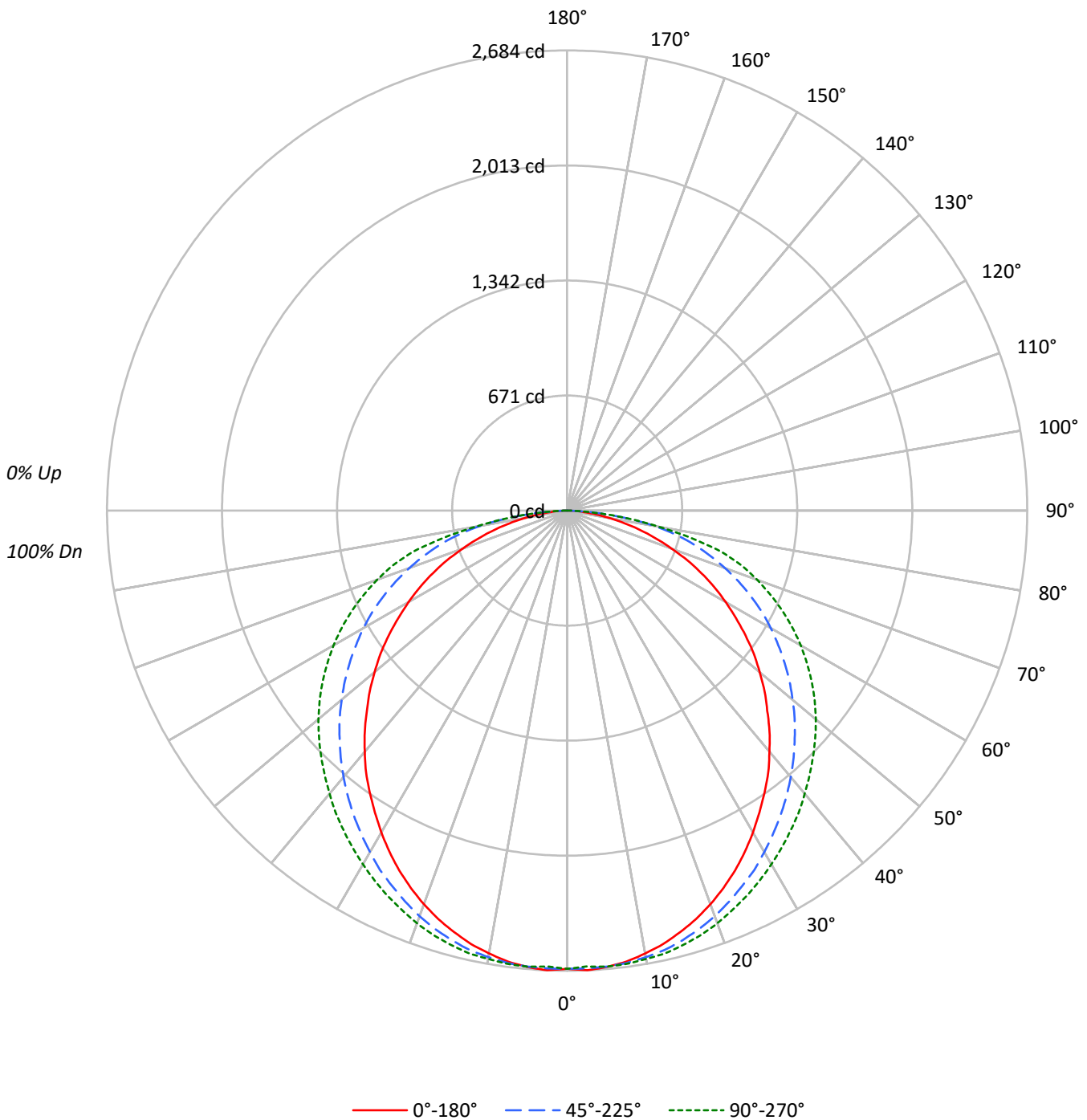
Input Watts (W): 69.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388304

CATALOG NUMBER: 24CZ2-100VHE-SQR-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388304

CATALOG NUMBER: 24CZ2-100VHE-SQR-UNV-L940-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	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3596	3596	3596
5°	3609	3606	3606
10°	3583	3613	3629
15°	3546	3615	3653
20°	3498	3605	3668
25°	3439	3586	3681
30°	3367	3573	3702
35°	3297	3564	3737
40°	3225	3564	3787
45°	3141	3572	3861
50°	3069	3594	3964
55°	2979	3633	4086
60°	2875	3692	4235
65°	2751	3762	4412
70°	2552	3856	4637
75°	2311	3990	4851
80°	1946	4000	4171
85°	1491	3026	3026



TEST NUMBER: P388304

CATALOG NUMBER: 24CZ2-100VHE-SQR-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.7	3.0
10°-20°	729.8	8.7
20°-30°	1108.6	13.3
30°-40°	1348.4	16.1
40°-50°	1435.7	17.2
50°-60°	1367.4	16.4
60°-70°	1143.5	13.7
70°-80°	762.4	9.1
80°-90°	210.9	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°	2092.1	25.0
0°-40°	3440.5	41.2
0°-60°	6243.6	74.7
0°-90°	8360.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8360.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2672	2672	2672	2672	2672	
5°	2672	2656	2670	2670	2670	254
15°	2545	2551	2595	2614	2623	718
25°	2316	2347	2416	2457	2479	1066
35°	2007	2065	2170	2242	2275	1256
45°	1651	1739	1877	1982	2029	1276
55°	1270	1380	1549	1684	1742	1135
65°	864	991	1182	1328	1386	854
75°	444	585	768	897	933	471
85°	97	179	196	193	196	117
90°	0	0	0	0	0	



TEST NUMBER: P388304

CATALOG NUMBER: 24CZ2-100VHE-SQR-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2672.4	2672.4	2672.4	2672.4	2672.4
2.5°	2683.5	2664.1	2672.4	2672.4	2661.4
5°	2672.4	2655.9	2669.7	2669.7	2669.7
7.5°	2653.1	2639.3	2661.4	2666.9	2666.9
10°	2622.7	2617.2	2644.8	2653.1	2655.9
12.5°	2589.6	2586.8	2625.5	2636.5	2644.8
15°	2545.4	2550.9	2595.1	2614.4	2622.7
17.5°	2498.5	2509.5	2559.2	2586.8	2595.1
20°	2443.3	2459.8	2517.8	2545.4	2562.0
22.5°	2382.5	2407.4	2468.1	2501.3	2520.6
25°	2316.3	2346.7	2415.7	2457.1	2479.2
27.5°	2244.5	2283.2	2363.2	2410.1	2432.2
30°	2167.2	2211.4	2299.7	2354.9	2382.5
32.5°	2087.1	2139.6	2236.2	2297.0	2330.1
35°	2007.1	2065.1	2170.0	2241.7	2274.9
37.5°	1927.0	1985.0	2100.9	2178.2	2219.7
40°	1835.9	1904.9	2029.2	2114.7	2156.2
42.5°	1747.6	1822.1	1954.6	2048.5	2092.7
45°	1650.9	1739.3	1877.3	1982.2	2029.2
47.5°	1562.6	1650.9	1800.0	1910.5	1962.9
50°	1466.0	1559.8	1717.2	1838.7	1893.9
52.5°	1372.1	1468.7	1634.4	1764.1	1819.3
55°	1270.0	1380.4	1548.8	1684.1	1742.0
57.5°	1167.8	1286.5	1460.4	1601.2	1659.2
60°	1068.4	1189.9	1372.1	1512.9	1573.6
62.5°	969.0	1090.5	1281.0	1424.6	1482.5
65°	864.1	991.1	1181.6	1327.9	1385.9
67.5°	759.2	891.7	1082.2	1228.5	1283.8
70°	648.8	789.6	980.1	1123.6	1178.8
72.5°	546.6	687.4	875.2	1016.0	1068.4
75°	444.5	585.3	767.5	897.2	933.1
77.5°	345.1	485.9	648.8	734.4	742.6
80°	251.2	383.7	516.3	541.1	538.3
82.5°	168.4	287.1	356.1	358.9	367.2
85°	96.6	179.4	196.0	193.3	196.0
87.5°	38.7	63.5	55.2	41.4	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)