

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: P391085

Luminaire Tested: **24CZ2-150VHE-HRP-UNV-L940-CD2-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: P391085
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: 24CZ2-150VHE-HRP-UNV-L940-CD2-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: 10880.8 lumens
Efficiency: N/A
Efficacy: 104.4 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

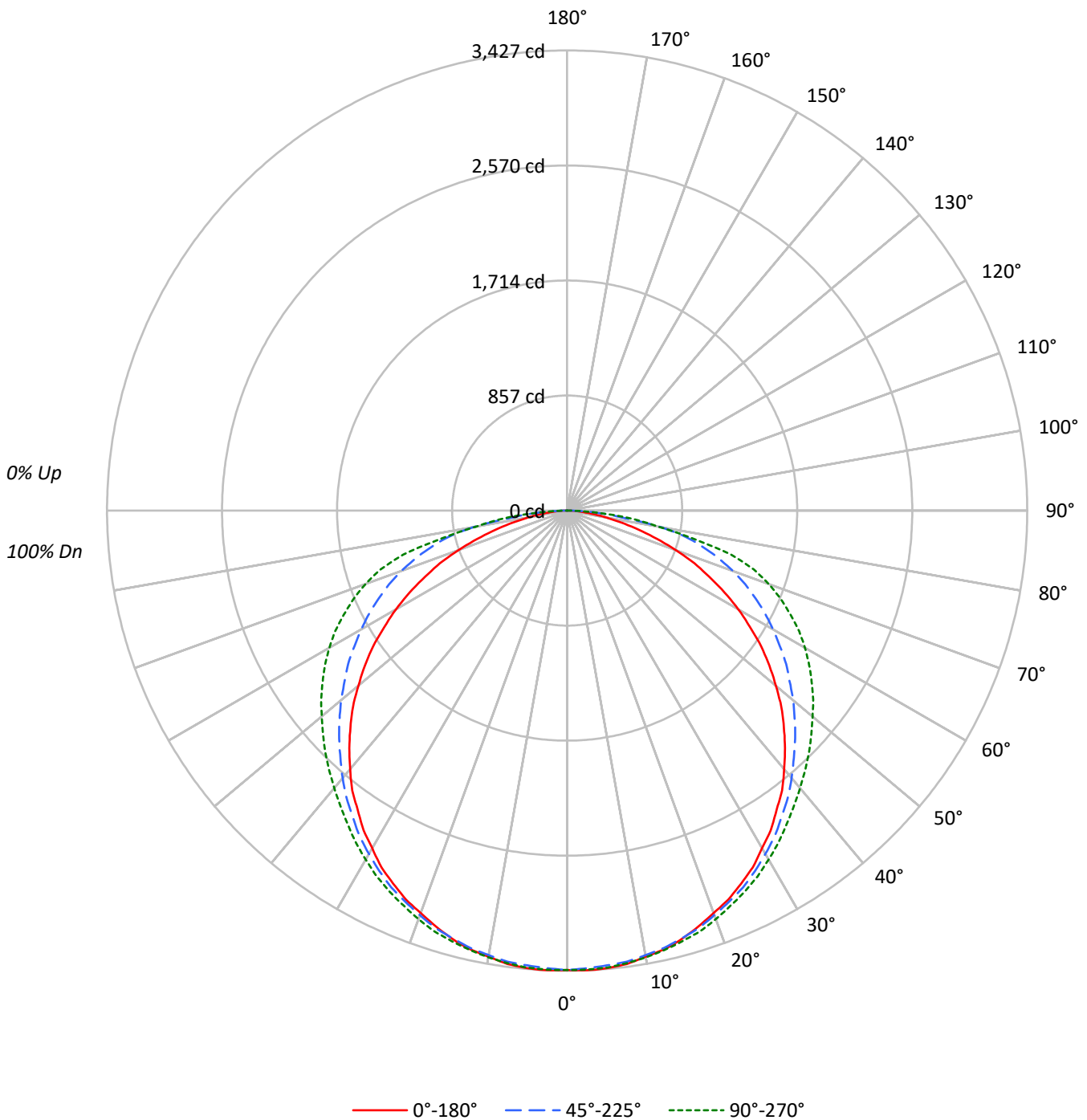
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391085

CATALOG NUMBER: 24CZ2-150VHE-HRP-UNV-L940-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P391085

CATALOG NUMBER: 24CZ2-150VHE-HRP-UNV-L940-CD2-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°	4604	4604	4604
5°	4621	4592	4614
10°	4608	4594	4616
15°	4601	4593	4623
20°	4567	4590	4637
25°	4551	4599	4647
30°	4511	4587	4662
35°	4468	4574	4681
40°	4417	4569	4740
45°	4344	4570	4847
50°	4248	4598	4993
55°	4140	4672	5216
60°	3965	4764	5504
65°	3712	4931	5842
70°	3376	5159	6284
75°	2862	5443	6565
80°	2258	5478	5311
85°	1666	4167	4665



TEST NUMBER: P391085

CATALOG NUMBER: 24CZ2-150VHE-HRP-UNV-L940-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.6	3.0
10°-20°	934.1	8.6
20°-30°	1428.5	13.1
30°-40°	1746.3	16.0
40°-50°	1861.2	17.1
50°-60°	1779.6	16.4
60°-70°	1507.5	13.9
70°-80°	1013.2	9.3
80°-90°	285.8	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°	2687.2	24.7
0°-40°	4433.5	40.7
0°-60°	8074.3	74.2
0°-90°	10880.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10880.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3422	3422	3422	3422	3422	
5°	3422	3416	3400	3416	3416	325
15°	3303	3303	3298	3325	3319	931
25°	3066	3076	3098	3125	3130	1413
35°	2720	2742	2785	2839	2850	1704
45°	2283	2321	2402	2504	2547	1761
55°	1765	1830	1992	2148	2224	1572
65°	1166	1284	1549	1754	1835	1157
75°	550	750	1047	1225	1263	589
85°	108	221	270	291	302	134
90°	0	0	0	0	0	



TEST NUMBER: P391085

CATALOG NUMBER: 24CZ2-150VHE-HRP-UNV-L940-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3421.7	3421.7	3421.7	3421.7	3421.7
2.5°	3427.1	3427.1	3410.9	3421.7	3421.7
5°	3421.7	3416.3	3400.1	3416.3	3416.3
7.5°	3405.5	3400.1	3389.3	3405.5	3400.1
10°	3373.1	3373.1	3362.3	3378.5	3378.5
12.5°	3346.1	3340.7	3335.3	3356.9	3351.5
15°	3303.0	3303.0	3297.6	3324.6	3319.2
17.5°	3249.0	3254.4	3259.8	3281.4	3286.8
20°	3189.6	3200.4	3205.8	3238.2	3238.2
22.5°	3135.7	3141.1	3151.9	3184.2	3184.2
25°	3065.5	3076.3	3097.9	3124.9	3130.3
27.5°	2995.3	3000.7	3027.7	3065.5	3070.9
30°	2903.6	2919.8	2952.2	2995.3	3000.7
32.5°	2822.6	2838.8	2876.6	2919.8	2930.6
35°	2720.1	2741.7	2784.9	2838.8	2849.6
37.5°	2628.3	2644.5	2698.5	2757.9	2774.1
40°	2515.0	2547.4	2601.4	2671.5	2698.5
42.5°	2401.7	2434.0	2498.8	2590.6	2622.9
45°	2282.9	2320.7	2401.7	2504.2	2547.4
47.5°	2164.2	2207.4	2299.1	2417.9	2466.4
50°	2029.3	2083.2	2196.6	2331.5	2385.5
52.5°	1899.7	1964.5	2088.6	2239.8	2309.9
55°	1764.8	1829.6	1991.5	2148.0	2223.6
57.5°	1613.7	1700.1	1878.2	2056.3	2137.2
60°	1473.4	1554.3	1770.2	1964.5	2045.5
62.5°	1322.3	1430.2	1662.3	1867.4	1948.3
65°	1165.8	1284.5	1548.9	1754.0	1835.0
67.5°	1025.4	1155.0	1435.6	1640.7	1721.6
70°	858.1	1020.0	1311.5	1516.6	1597.5
72.5°	701.6	879.7	1181.9	1381.6	1457.2
75°	550.5	750.2	1047.0	1225.1	1262.9
77.5°	410.2	620.7	906.7	982.3	955.3
80°	291.4	496.5	707.0	669.2	685.4
82.5°	188.9	377.8	437.2	496.5	512.7
85°	107.9	221.3	269.9	291.4	302.2
87.5°	48.6	81.0	107.9	107.9	102.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)