

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: P391658

Luminaire Tested: **24CZ2-75VHE-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: P391658
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: 24CZ2-75VHE-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: 5498.8 lumens
Efficiency: N/A
Efficacy: 110.2 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

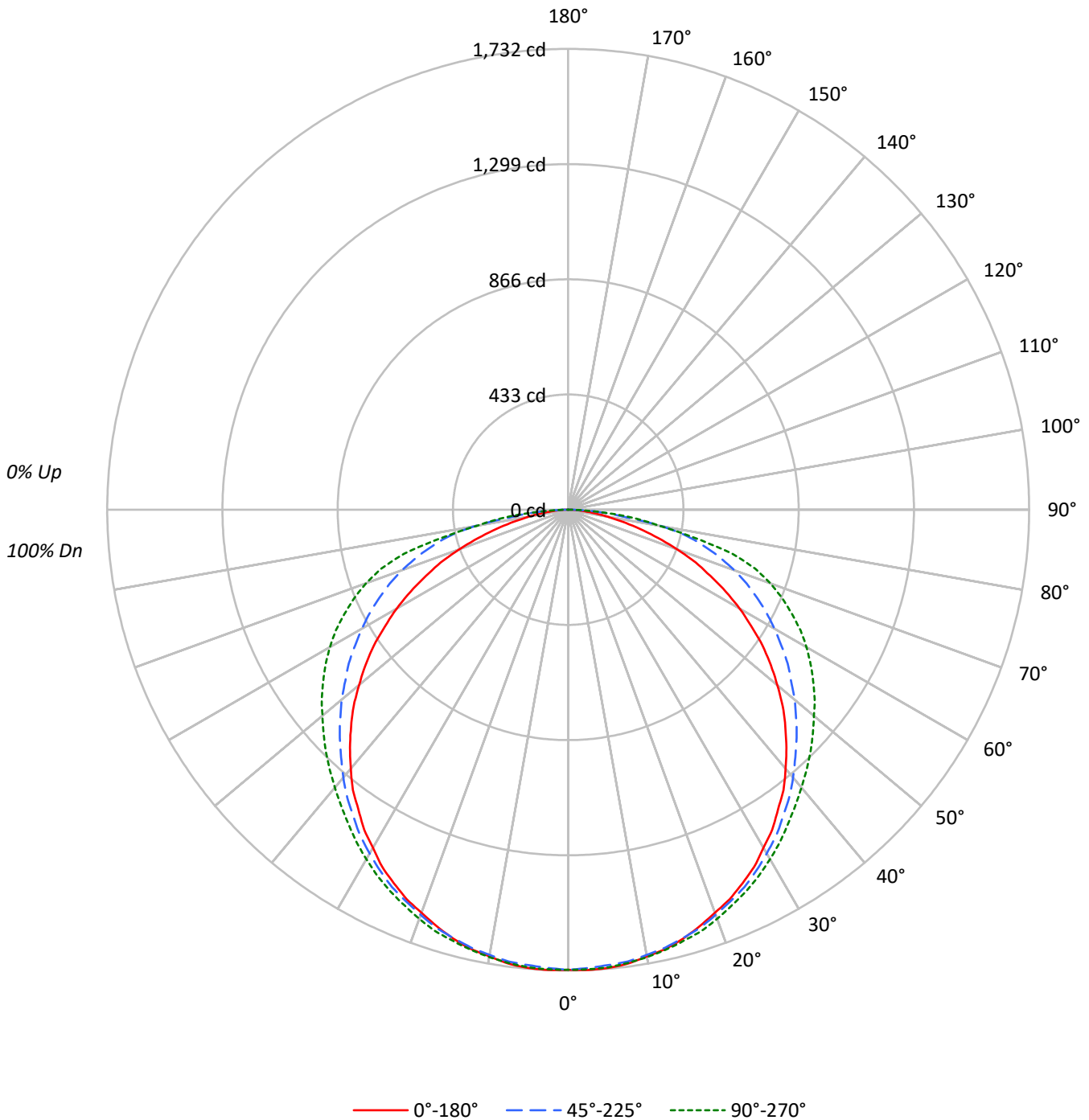
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	2327	2327	2327
5°	2336	2321	2332
10°	2329	2322	2333
15°	2325	2321	2337
20°	2308	2320	2343
25°	2300	2324	2348
30°	2280	2318	2356
35°	2258	2312	2365
40°	2232	2309	2395
45°	2195	2309	2450
50°	2147	2324	2523
55°	2092	2361	2636
60°	2004	2407	2782
65°	1876	2492	2952
70°	1706	2607	3176
75°	1446	2751	3318
80°	1141	2768	2684
85°	841	2106	2357



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.0	3.0
10°-20°	472.1	8.6
20°-30°	721.9	13.1
30°-40°	882.5	16.0
40°-50°	940.6	17.1
50°-60°	899.3	16.4
60°-70°	761.9	13.9
70°-80°	512.0	9.3
80°-90°	144.4	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°	1358.0	24.7
0°-40°	2240.6	40.7
0°-60°	4080.5	74.2
0°-90°	5498.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5498.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1729	1729	1729	1729	1729	
5°	1729	1726	1718	1726	1726	164
15°	1669	1669	1666	1680	1677	471
25°	1549	1555	1566	1579	1582	714
35°	1375	1386	1407	1435	1440	861
45°	1154	1173	1214	1266	1287	890
55°	892	925	1006	1086	1124	794
65°	589	649	783	886	927	585
75°	278	379	529	619	638	298
85°	54	112	136	147	153	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1729.2	1729.2	1729.2	1729.2	1729.2
2.5°	1731.9	1731.9	1723.8	1729.2	1729.2
5°	1729.2	1726.5	1718.3	1726.5	1726.5
7.5°	1721.0	1718.3	1712.9	1721.0	1718.3
10°	1704.7	1704.7	1699.2	1707.4	1707.4
12.5°	1691.0	1688.3	1685.6	1696.5	1693.8
15°	1669.2	1669.2	1666.5	1680.1	1677.4
17.5°	1641.9	1644.7	1647.4	1658.3	1661.0
20°	1611.9	1617.4	1620.1	1636.5	1636.5
22.5°	1584.7	1587.4	1592.8	1609.2	1609.2
25°	1549.2	1554.7	1565.6	1579.2	1581.9
27.5°	1513.7	1516.5	1530.1	1549.2	1551.9
30°	1467.4	1475.6	1491.9	1513.7	1516.5
32.5°	1426.5	1434.6	1453.7	1475.6	1481.0
35°	1374.6	1385.6	1407.4	1434.6	1440.1
37.5°	1328.3	1336.5	1363.7	1393.7	1401.9
40°	1271.0	1287.4	1314.6	1350.1	1363.7
42.5°	1213.7	1230.1	1262.8	1309.2	1325.6
45°	1153.7	1172.8	1213.7	1265.5	1287.4
47.5°	1093.7	1115.5	1161.9	1221.9	1246.5
50°	1025.5	1052.8	1110.1	1178.3	1205.5
52.5°	960.1	992.8	1055.5	1131.9	1167.4
55°	891.9	924.6	1006.4	1085.5	1123.7
57.5°	815.5	859.2	949.2	1039.2	1080.1
60°	744.6	785.5	894.6	992.8	1033.7
62.5°	668.2	722.8	840.1	943.7	984.6
65°	589.1	649.1	782.8	886.4	927.3
67.5°	518.2	583.7	725.5	829.2	870.1
70°	433.7	515.5	662.8	766.4	807.3
72.5°	354.6	444.6	597.3	698.2	736.4
75°	278.2	379.1	529.1	619.1	638.2
77.5°	207.3	313.7	458.2	496.4	482.8
80°	147.3	250.9	357.3	338.2	346.4
82.5°	95.5	190.9	220.9	250.9	259.1
85°	54.5	111.8	136.4	147.3	152.7
87.5°	24.5	40.9	54.5	54.5	51.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)