

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: P390986

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L935-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: P390986
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: 24CZ2-120VHE-HRP-UNV-L935-CD2-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: 8763.5 lumens
Efficiency: N/A
Efficacy: 104.8 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

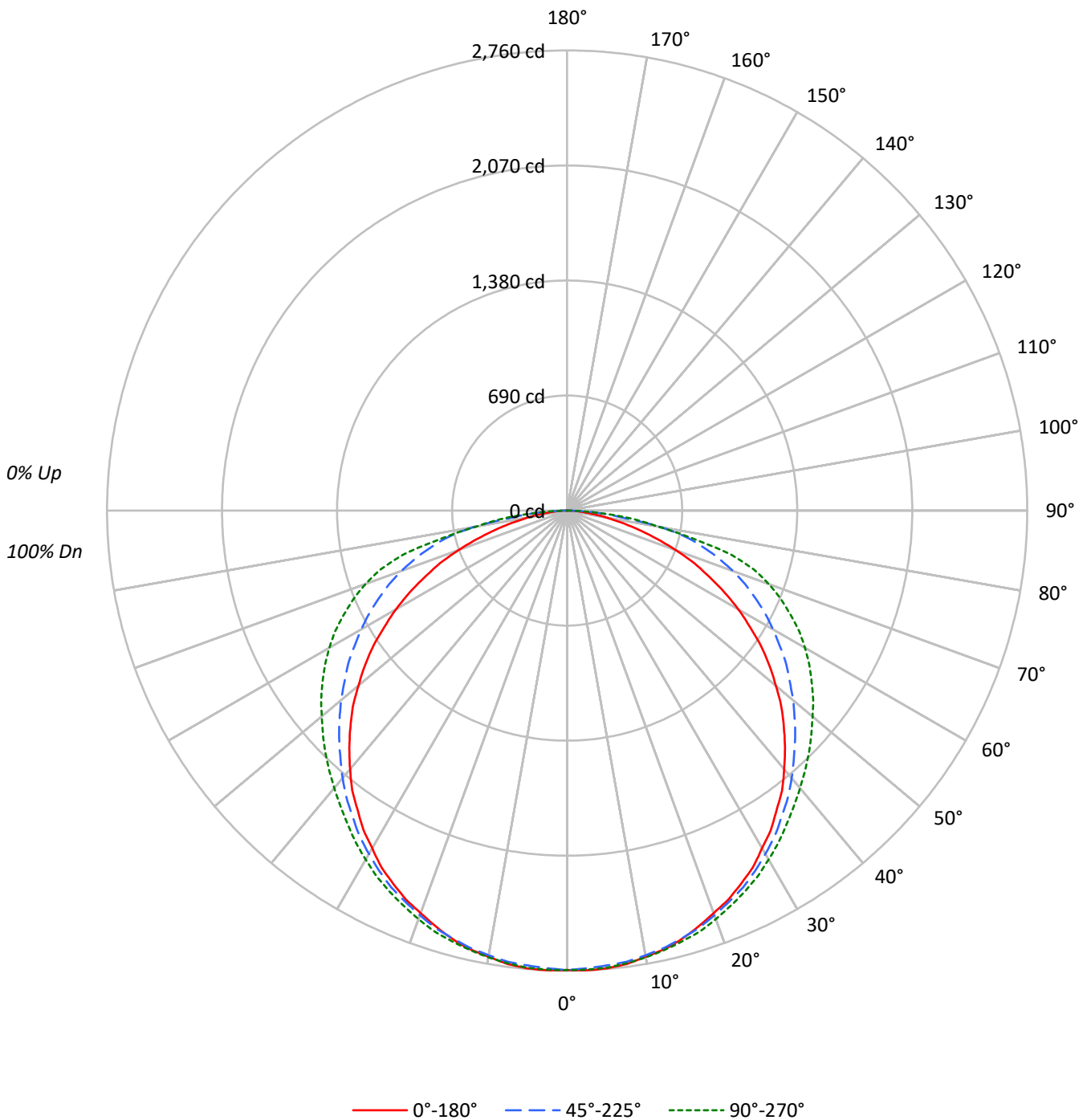
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3708	3708	3708
5°	3722	3699	3716
10°	3712	3700	3718
15°	3706	3700	3724
20°	3678	3697	3734
25°	3665	3704	3743
30°	3633	3694	3755
35°	3598	3684	3770
40°	3558	3680	3817
45°	3499	3681	3904
50°	3421	3703	4022
55°	3334	3763	4201
60°	3193	3837	4433
65°	2989	3972	4705
70°	2719	4155	5062
75°	2305	4384	5288
80°	1819	4412	4277
85°	1342	3355	3758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.4	3.0
10°-20°	752.4	8.6
20°-30°	1150.5	13.1
30°-40°	1406.5	16.0
40°-50°	1499.0	17.1
50°-60°	1433.3	16.4
60°-70°	1214.2	13.9
70°-80°	816.0	9.3
80°-90°	230.2	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°	2164.3	24.7
0°-40°	3570.8	40.7
0°-60°	6503.1	74.2
0°-90°	8763.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8763.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2756	2756	2756	2756	2756	
5°	2756	2752	2738	2752	2752	262
15°	2660	2660	2656	2678	2673	750
25°	2469	2478	2495	2517	2521	1138
35°	2191	2208	2243	2286	2295	1372
45°	1839	1869	1934	2017	2052	1418
55°	1421	1474	1604	1730	1791	1266
65°	939	1034	1248	1413	1478	932
75°	443	604	843	987	1017	475
85°	87	178	217	235	243	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2755.9	2755.9	2755.9	2755.9	2755.9
2.5°	2760.2	2760.2	2747.2	2755.9	2755.9
5°	2755.9	2751.5	2738.5	2751.5	2751.5
7.5°	2742.8	2738.5	2729.8	2742.8	2738.5
10°	2716.7	2716.7	2708.1	2721.1	2721.1
12.5°	2695.0	2690.7	2686.3	2703.7	2699.4
15°	2660.2	2660.2	2655.9	2677.6	2673.3
17.5°	2616.8	2621.1	2625.5	2642.9	2647.2
20°	2569.0	2577.7	2582.0	2608.1	2608.1
22.5°	2525.5	2529.8	2538.5	2564.6	2564.6
25°	2469.0	2477.7	2495.1	2516.8	2521.1
27.5°	2412.5	2416.8	2438.6	2469.0	2473.3
30°	2338.6	2351.6	2377.7	2412.5	2416.8
32.5°	2273.4	2286.4	2316.8	2351.6	2360.3
35°	2190.8	2208.2	2242.9	2286.4	2295.1
37.5°	2116.9	2129.9	2173.4	2221.2	2234.3
40°	2025.6	2051.7	2095.2	2151.7	2173.4
42.5°	1934.3	1960.4	2012.6	2086.5	2112.5
45°	1838.7	1869.1	1934.3	2016.9	2051.7
47.5°	1743.1	1777.8	1851.7	1947.4	1986.5
50°	1634.4	1677.9	1769.1	1877.8	1921.3
52.5°	1530.1	1582.2	1682.2	1803.9	1860.4
55°	1421.4	1473.6	1604.0	1730.0	1790.9
57.5°	1299.7	1369.2	1512.7	1656.1	1721.3
60°	1186.7	1251.9	1425.8	1582.2	1647.4
62.5°	1065.0	1151.9	1338.8	1504.0	1569.2
65°	938.9	1034.5	1247.5	1412.7	1477.9
67.5°	825.9	930.2	1156.2	1321.4	1386.6
70°	691.1	821.5	1056.3	1221.5	1286.7
72.5°	565.1	708.5	951.9	1112.8	1173.6
75°	443.4	604.2	843.3	986.7	1017.2
77.5°	330.4	499.9	730.3	791.1	769.4
80°	234.7	399.9	569.4	539.0	552.0
82.5°	152.1	304.3	352.1	399.9	412.9
85°	86.9	178.2	217.3	234.7	243.4
87.5°	39.1	65.2	86.9	86.9	82.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)