

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: P390989

Luminaire Tested: **24CZ2-120VHE-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: P390989
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-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: 8854.1 lumens
Efficiency: N/A
Efficacy: 105.9 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

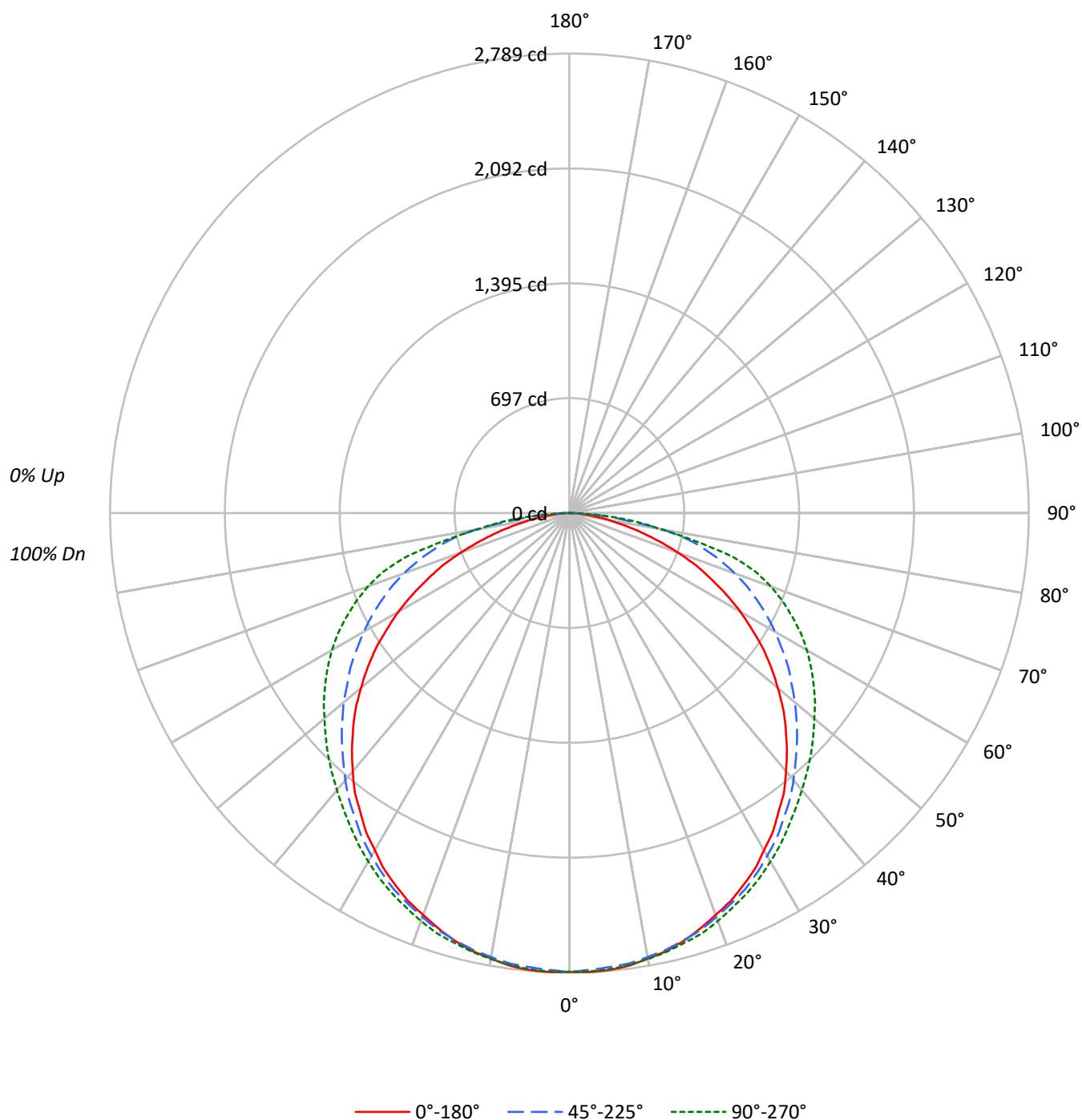
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3746	3746	3746
5°	3761	3737	3755
10°	3750	3738	3756
15°	3744	3738	3762
20°	3716	3735	3773
25°	3703	3742	3782
30°	3671	3732	3794
35°	3636	3722	3809
40°	3594	3718	3857
45°	3535	3719	3944
50°	3457	3741	4063
55°	3369	3802	4244
60°	3226	3876	4479
65°	3020	4013	4754
70°	2747	4198	5114
75°	2329	4429	5343
80°	1838	4458	4322
85°	1355	3390	3796



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.1	3.0
10°-20°	760.1	8.6
20°-30°	1162.4	13.1
30°-40°	1421.0	16.0
40°-50°	1514.5	17.1
50°-60°	1448.1	16.4
60°-70°	1226.7	13.9
70°-80°	824.5	9.3
80°-90°	232.6	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°	2186.7	24.7
0°-40°	3607.7	40.7
0°-60°	6570.4	74.2
0°-90°	8854.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8854.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2784	2784	2784	2784	2784	
5°	2784	2780	2767	2780	2780	265
15°	2688	2688	2683	2705	2701	758
25°	2494	2503	2521	2543	2547	1150
35°	2213	2231	2266	2310	2319	1387
45°	1858	1888	1954	2038	2073	1433
55°	1436	1489	1621	1748	1809	1279
65°	949	1045	1260	1427	1493	942
75°	448	610	852	997	1028	480
85°	88	180	220	237	246	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2784.4	2784.4	2784.4	2784.4	2784.4
2.5°	2788.8	2788.8	2775.6	2784.4	2784.4
5°	2784.4	2780.0	2766.8	2780.0	2780.0
7.5°	2771.2	2766.8	2758.0	2771.2	2766.8
10°	2744.8	2744.8	2736.1	2749.2	2749.2
12.5°	2722.9	2718.5	2714.1	2731.7	2727.3
15°	2687.7	2687.7	2683.4	2705.3	2700.9
17.5°	2643.8	2648.2	2652.6	2670.2	2674.6
20°	2595.5	2604.3	2608.7	2635.0	2635.0
22.5°	2551.6	2556.0	2564.8	2591.1	2591.1
25°	2494.5	2503.3	2520.9	2542.8	2547.2
27.5°	2437.4	2441.8	2463.8	2494.5	2498.9
30°	2362.8	2375.9	2402.3	2437.4	2441.8
32.5°	2296.9	2310.1	2340.8	2375.9	2384.7
35°	2213.4	2231.0	2266.1	2310.1	2318.8
37.5°	2138.8	2152.0	2195.9	2244.2	2257.4
40°	2046.5	2072.9	2116.8	2173.9	2195.9
42.5°	1954.3	1980.7	2033.4	2108.0	2134.4
45°	1857.7	1888.4	1954.3	2037.8	2072.9
47.5°	1761.1	1796.2	1870.9	1967.5	2007.0
50°	1651.3	1695.2	1787.4	1897.2	1941.1
52.5°	1545.9	1598.6	1699.6	1822.6	1879.7
55°	1436.1	1488.8	1620.6	1747.9	1809.4
57.5°	1313.1	1383.4	1528.3	1673.3	1739.1
60°	1198.9	1264.8	1440.5	1598.6	1664.5
62.5°	1076.0	1163.8	1352.7	1519.5	1585.4
65°	948.6	1045.2	1260.4	1427.3	1493.2
67.5°	834.4	939.8	1168.2	1335.1	1401.0
70°	698.3	830.0	1067.2	1234.1	1300.0
72.5°	570.9	715.9	961.8	1124.3	1185.8
75°	448.0	610.5	852.0	996.9	1027.7
77.5°	333.8	505.0	737.8	799.3	777.3
80°	237.2	404.0	575.3	544.6	557.8
82.5°	153.7	307.4	355.7	404.0	417.2
85°	87.8	180.1	219.6	237.2	245.9
87.5°	39.5	65.9	87.8	87.8	83.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)