

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: P391751

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L930-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: P391751
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: 24CZ2-85VHE-HRP-UNV-L930-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6023.0 lumens
Efficiency: N/A
Efficacy: 104.0 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

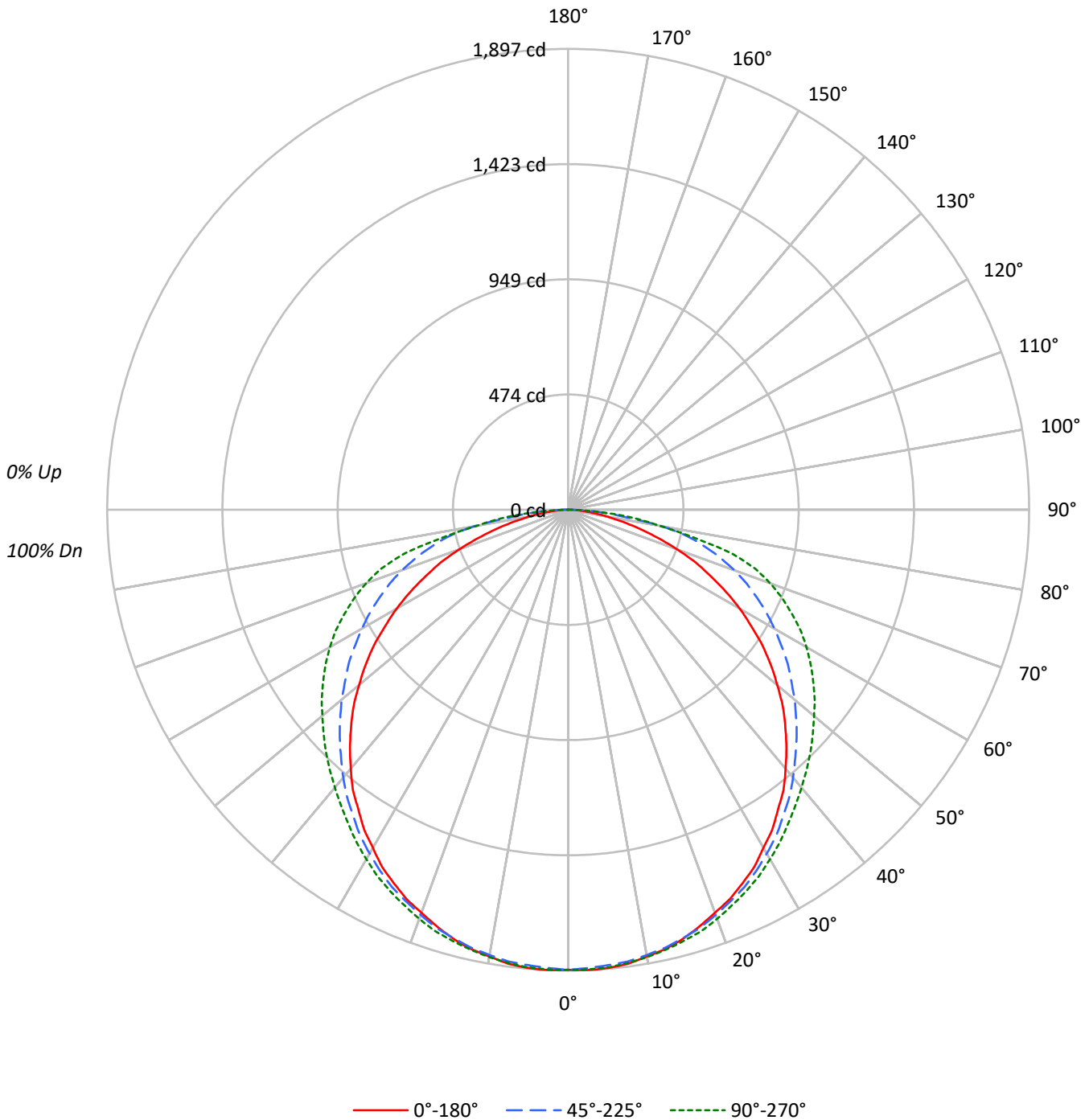
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2548	2548	2548
5°	2558	2542	2554
10°	2551	2543	2555
15°	2547	2543	2559
20°	2528	2541	2567
25°	2519	2546	2572
30°	2497	2539	2581
35°	2473	2532	2591
40°	2445	2529	2624
45°	2405	2530	2683
50°	2351	2545	2764
55°	2292	2586	2887
60°	2195	2637	3047
65°	2054	2730	3234
70°	1869	2856	3479
75°	1584	3013	3634
80°	1250	3033	2940
85°	922	2306	2583



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.7	3.0
10°-20°	517.1	8.6
20°-30°	790.7	13.1
30°-40°	966.7	16.0
40°-50°	1030.3	17.1
50°-60°	985.1	16.4
60°-70°	834.5	13.9
70°-80°	560.8	9.3
80°-90°	158.2	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°	1487.5	24.7
0°-40°	2454.2	40.7
0°-60°	4469.5	74.2
0°-90°	6023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1894	1894	1894	1894	1894	
5°	1894	1891	1882	1891	1891	180
15°	1828	1828	1825	1840	1837	516
25°	1697	1703	1715	1730	1733	782
35°	1506	1518	1542	1571	1577	943
45°	1264	1285	1329	1386	1410	975
55°	977	1013	1102	1189	1231	870
65°	645	711	857	971	1016	641
75°	305	415	580	678	699	326
85°	60	122	149	161	167	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1894.1	1894.1	1894.1	1894.1	1894.1
2.5°	1897.0	1897.0	1888.1	1894.1	1894.1
5°	1894.1	1891.1	1882.1	1891.1	1891.1
7.5°	1885.1	1882.1	1876.1	1885.1	1882.1
10°	1867.2	1867.2	1861.2	1870.2	1870.2
12.5°	1852.2	1849.2	1846.3	1858.2	1855.2
15°	1828.3	1828.3	1825.3	1840.3	1837.3
17.5°	1798.5	1801.4	1804.4	1816.4	1819.4
20°	1765.6	1771.6	1774.6	1792.5	1792.5
22.5°	1735.7	1738.7	1744.7	1762.6	1762.6
25°	1696.9	1702.9	1714.8	1729.8	1732.7
27.5°	1658.1	1661.0	1676.0	1696.9	1699.9
30°	1607.3	1616.2	1634.2	1658.1	1661.0
32.5°	1562.5	1571.4	1592.3	1616.2	1622.2
35°	1505.7	1517.6	1541.5	1571.4	1577.4
37.5°	1454.9	1463.9	1493.7	1526.6	1535.6
40°	1392.2	1410.1	1440.0	1478.8	1493.7
42.5°	1329.4	1347.4	1383.2	1434.0	1451.9
45°	1263.7	1284.6	1329.4	1386.2	1410.1
47.5°	1198.0	1221.9	1272.7	1338.4	1365.3
50°	1123.3	1153.2	1215.9	1290.6	1320.5
52.5°	1051.6	1087.4	1156.2	1239.8	1278.6
55°	976.9	1012.8	1102.4	1189.0	1230.8
57.5°	893.3	941.1	1039.6	1138.2	1183.0
60°	815.6	860.4	979.9	1087.4	1132.3
62.5°	731.9	791.7	920.1	1033.7	1078.5
65°	645.3	711.0	857.4	970.9	1015.7
67.5°	567.6	639.3	794.7	908.2	953.0
70°	475.0	564.6	726.0	839.5	884.3
72.5°	388.4	487.0	654.3	764.8	806.6
75°	304.7	415.3	579.6	678.2	699.1
77.5°	227.0	343.6	501.9	543.7	528.8
80°	161.3	274.8	391.4	370.4	379.4
82.5°	104.6	209.1	242.0	274.8	283.8
85°	59.7	122.5	149.4	161.3	167.3
87.5°	26.9	44.8	59.7	59.7	56.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)