

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: P391752

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L935-CD1-SDWPD1-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: P391752
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-L935-CD1-SDWPD1-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: 6021.9 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

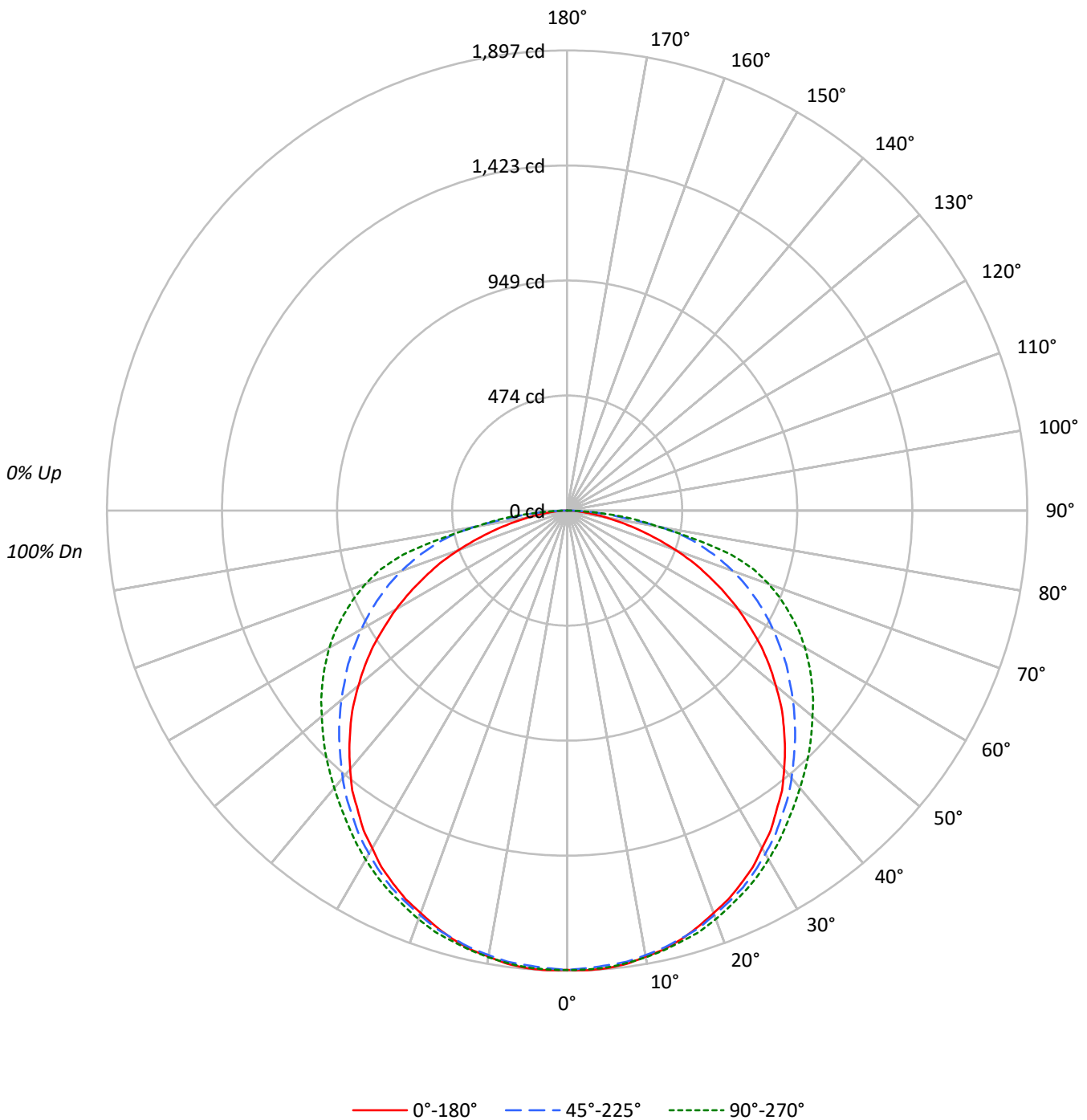
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	2542	2555
15°	2546	2542	2559
20°	2528	2540	2566
25°	2519	2545	2572
30°	2497	2538	2580
35°	2473	2532	2590
40°	2445	2529	2623
45°	2404	2529	2683
50°	2351	2545	2763
55°	2291	2586	2887
60°	2194	2636	3046
65°	2054	2729	3233
70°	1868	2855	3478
75°	1584	3013	3633
80°	1250	3032	2939
85°	922	2305	2583



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.6	3.0
10°-20°	517.0	8.6
20°-30°	790.6	13.1
30°-40°	966.5	16.0
40°-50°	1030.1	17.1
50°-60°	984.9	16.4
60°-70°	834.3	13.9
70°-80°	560.7	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°	1487.2	24.7
0°-40°	2453.7	40.7
0°-60°	4468.7	74.2
0°-90°	6021.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6021.9	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	515
25°	1697	1703	1714	1729	1732	782
35°	1505	1517	1541	1571	1577	943
45°	1264	1284	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°	1893.7	1893.7	1893.7	1893.7	1893.7
2.5°	1896.7	1896.7	1887.7	1893.7	1893.7
5°	1893.7	1890.7	1881.8	1890.7	1890.7
7.5°	1884.8	1881.8	1875.8	1884.8	1881.8
10°	1866.8	1866.8	1860.9	1869.8	1869.8
12.5°	1851.9	1848.9	1845.9	1857.9	1854.9
15°	1828.0	1828.0	1825.0	1840.0	1837.0
17.5°	1798.1	1801.1	1804.1	1816.1	1819.0
20°	1765.3	1771.3	1774.2	1792.2	1792.2
22.5°	1735.4	1738.4	1744.4	1762.3	1762.3
25°	1696.6	1702.6	1714.5	1729.4	1732.4
27.5°	1657.7	1660.7	1675.7	1696.6	1699.6
30°	1607.0	1615.9	1633.9	1657.7	1660.7
32.5°	1562.2	1571.1	1592.0	1615.9	1621.9
35°	1505.4	1517.4	1541.3	1571.1	1577.1
37.5°	1454.6	1463.6	1493.5	1526.3	1535.3
40°	1391.9	1409.8	1439.7	1478.5	1493.5
42.5°	1329.2	1347.1	1383.0	1433.7	1451.6
45°	1263.5	1284.4	1329.2	1385.9	1409.8
47.5°	1197.8	1221.7	1272.4	1338.1	1365.0
50°	1123.1	1153.0	1215.7	1290.4	1320.2
52.5°	1051.4	1087.2	1155.9	1239.6	1278.4
55°	976.7	1012.6	1102.2	1188.8	1230.6
57.5°	893.1	940.9	1039.5	1138.0	1182.8
60°	815.4	860.2	979.7	1087.2	1132.0
62.5°	731.8	791.5	920.0	1033.5	1078.3
65°	645.2	710.9	857.2	970.8	1015.6
67.5°	567.5	639.2	794.5	908.0	952.8
70°	474.9	564.5	725.8	839.3	884.1
72.5°	388.3	486.9	654.1	764.7	806.5
75°	304.7	415.2	579.5	678.0	698.9
77.5°	227.0	343.5	501.8	543.6	528.7
80°	161.3	274.8	391.3	370.4	379.3
82.5°	104.5	209.1	241.9	274.8	283.8
85°	59.7	122.5	149.3	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)