

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: P391753

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L935-CD1-SWPD1-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: P391753
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-SWPD1-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: 6095.4 lumens
Efficiency: N/A
Efficacy: 105.3 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

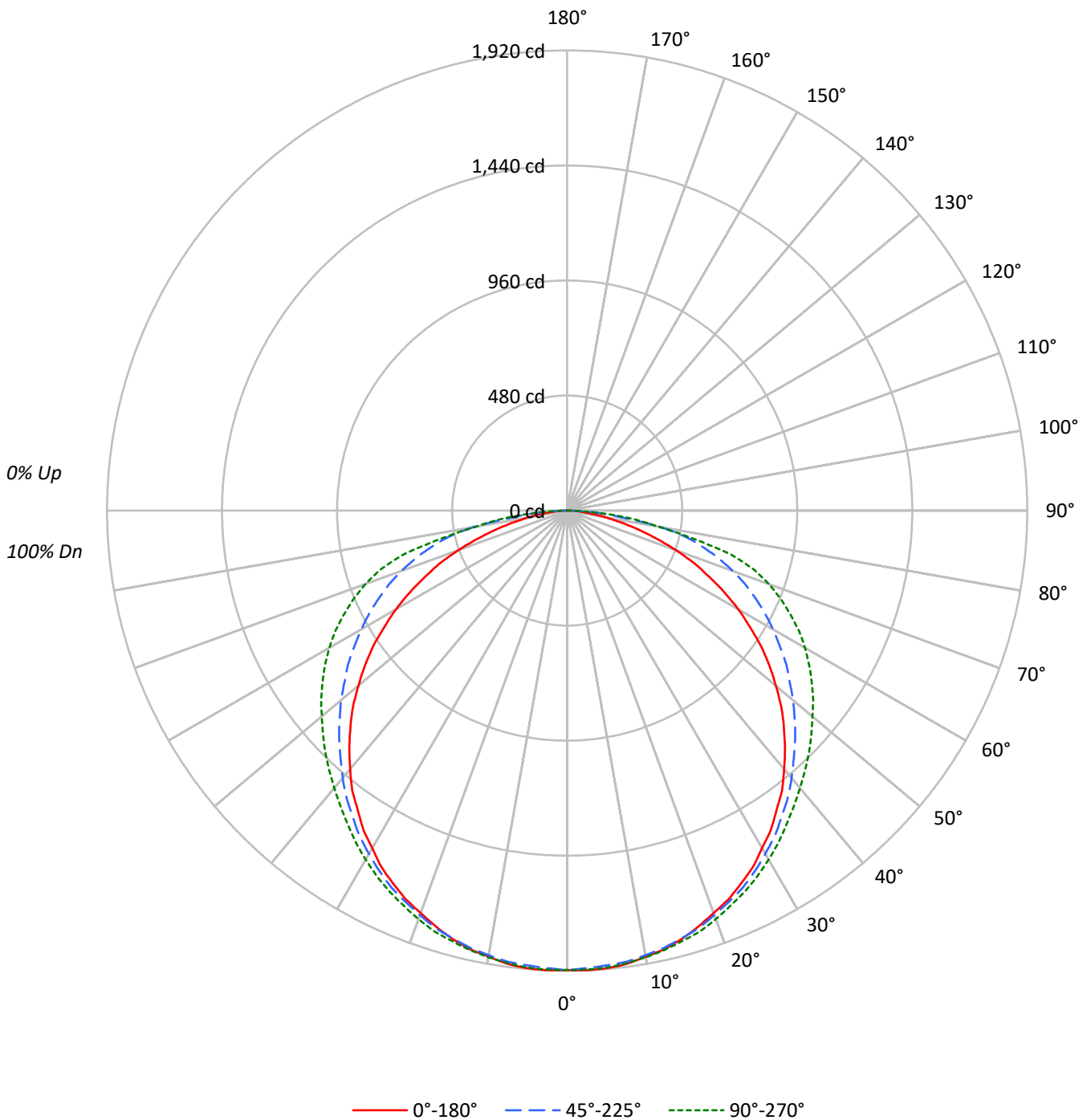
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2579	2579	2579
5°	2589	2573	2585
10°	2582	2573	2586
15°	2577	2573	2590
20°	2558	2571	2597
25°	2549	2576	2603
30°	2527	2569	2612
35°	2503	2563	2622
40°	2475	2560	2655
45°	2434	2560	2715
50°	2380	2576	2797
55°	2319	2617	2922
60°	2221	2669	3084
65°	2079	2762	3273
70°	1891	2890	3520
75°	1603	3049	3678
80°	1265	3069	2975
85°	934	2334	2614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.8	3.0
10°-20°	523.3	8.6
20°-30°	800.2	13.1
30°-40°	978.3	16.0
40°-50°	1042.7	17.1
50°-60°	996.9	16.4
60°-70°	844.5	13.9
70°-80°	567.6	9.3
80°-90°	160.1	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°	1505.4	24.7
0°-40°	2483.7	40.7
0°-60°	4523.2	74.2
0°-90°	6095.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6095.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1917	1917	1917	1917	1917	
5°	1917	1914	1905	1914	1914	182
15°	1850	1850	1847	1862	1859	522
25°	1717	1723	1735	1750	1754	791
35°	1524	1536	1560	1590	1596	955
45°	1279	1300	1345	1403	1427	986
55°	989	1025	1116	1203	1246	881
65°	653	720	868	983	1028	648
75°	308	420	586	686	708	330
85°	60	124	151	163	169	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1916.8	1916.8	1916.8	1916.8	1916.8
2.5°	1919.9	1919.9	1910.8	1916.8	1916.8
5°	1916.8	1913.8	1904.7	1913.8	1913.8
7.5°	1907.8	1904.7	1898.7	1907.8	1904.7
10°	1889.6	1889.6	1883.6	1892.6	1892.6
12.5°	1874.5	1871.5	1868.5	1880.5	1877.5
15°	1850.3	1850.3	1847.3	1862.4	1859.4
17.5°	1820.1	1823.1	1826.1	1838.2	1841.2
20°	1786.8	1792.9	1795.9	1814.0	1814.0
22.5°	1756.6	1759.6	1765.7	1783.8	1783.8
25°	1717.3	1723.3	1735.4	1750.5	1753.6
27.5°	1678.0	1681.0	1696.1	1717.3	1720.3
30°	1626.6	1635.7	1653.8	1678.0	1681.0
32.5°	1581.2	1590.3	1611.5	1635.7	1641.7
35°	1523.8	1535.9	1560.1	1590.3	1596.3
37.5°	1472.4	1481.5	1511.7	1545.0	1554.0
40°	1408.9	1427.0	1457.3	1496.6	1511.7
42.5°	1345.4	1363.5	1399.8	1451.2	1469.4
45°	1278.9	1300.1	1345.4	1402.9	1427.0
47.5°	1212.4	1236.6	1288.0	1354.5	1381.7
50°	1136.8	1167.0	1230.5	1306.1	1336.3
52.5°	1064.2	1100.5	1170.1	1254.7	1294.0
55°	988.6	1024.9	1115.6	1203.3	1245.6
57.5°	904.0	952.4	1052.1	1151.9	1197.3
60°	825.4	870.7	991.7	1100.5	1145.9
62.5°	740.7	801.2	931.2	1046.1	1091.4
65°	653.1	719.6	867.7	982.6	1028.0
67.5°	574.4	647.0	804.2	919.1	964.5
70°	480.7	571.4	734.7	849.6	894.9
72.5°	393.0	492.8	662.1	774.0	816.3
75°	308.4	420.3	586.5	686.3	707.5
77.5°	229.8	347.7	507.9	550.3	535.1
80°	163.3	278.2	396.1	374.9	384.0
82.5°	105.8	211.6	244.9	278.2	287.2
85°	60.5	124.0	151.2	163.3	169.3
87.5°	27.2	45.4	60.5	60.5	57.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)