

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: P391755

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L940-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: P391755
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-L940-CD1-SDWPD1-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: 6084.2 lumens
Efficiency: N/A
Efficacy: 105.1 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

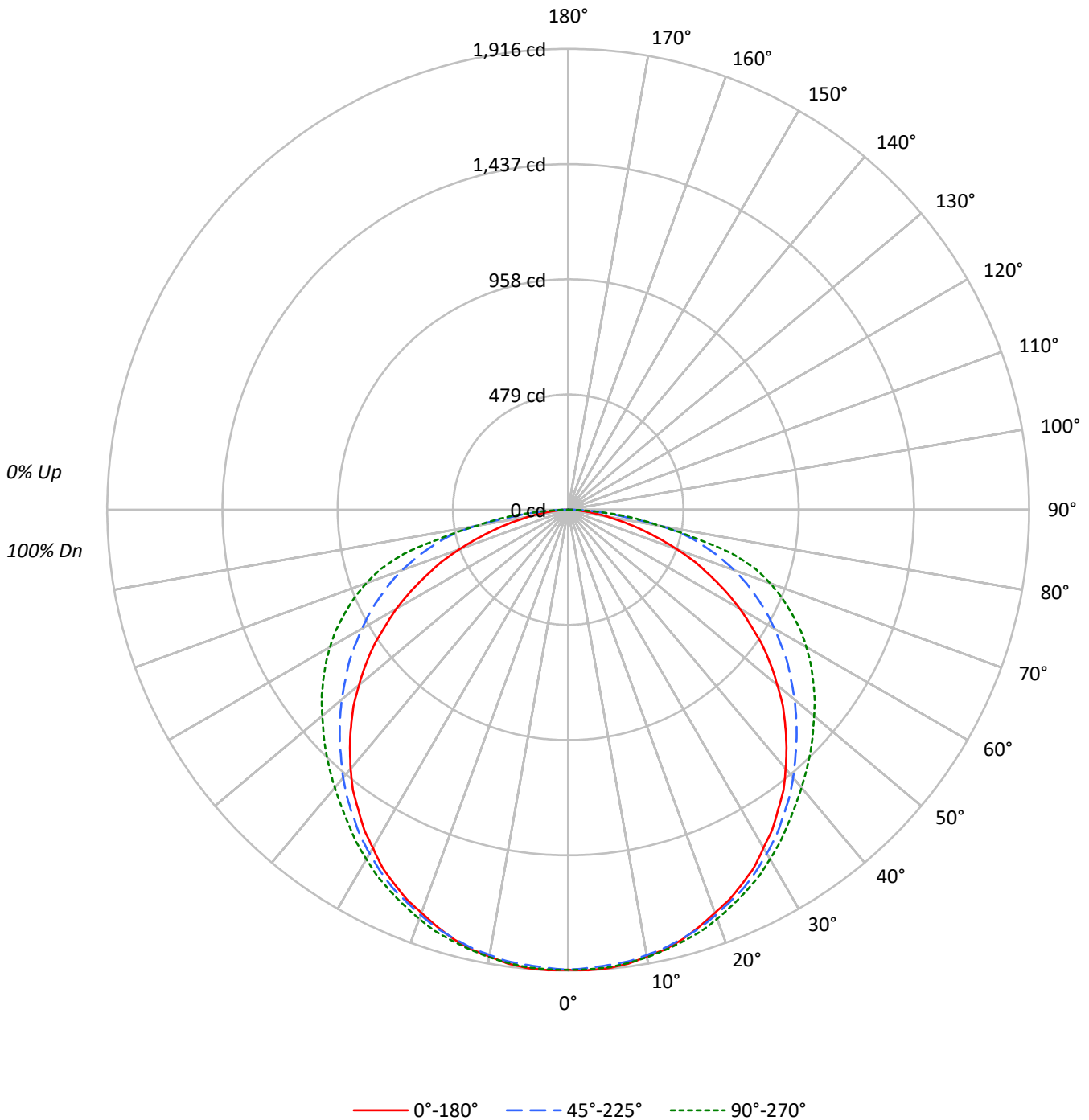
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2574	2574	2574
5°	2584	2568	2580
10°	2577	2569	2581
15°	2573	2568	2585
20°	2554	2567	2593
25°	2545	2572	2598
30°	2522	2565	2607
35°	2498	2558	2617
40°	2470	2555	2650
45°	2429	2555	2710
50°	2375	2571	2792
55°	2315	2612	2917
60°	2217	2664	3078
65°	2075	2757	3267
70°	1888	2885	3514
75°	1600	3044	3671
80°	1263	3063	2970
85°	932	2330	2609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	3.0
10°-20°	522.3	8.6
20°-30°	798.8	13.1
30°-40°	976.5	16.0
40°-50°	1040.7	17.1
50°-60°	995.1	16.4
60°-70°	842.9	13.9
70°-80°	566.5	9.3
80°-90°	159.8	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°	1502.6	24.7
0°-40°	2479.1	40.7
0°-60°	4514.9	74.2
0°-90°	6084.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6084.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1913	1913	1913	1913	1913	
5°	1913	1910	1901	1910	1910	182
15°	1847	1847	1844	1859	1856	521
25°	1714	1720	1732	1747	1750	790
35°	1521	1533	1557	1587	1593	953
45°	1276	1298	1343	1400	1424	985
55°	987	1023	1114	1201	1243	879
65°	652	718	866	981	1026	647
75°	308	420	586	685	706	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°	1913.3	1913.3	1913.3	1913.3	1913.3
2.5°	1916.3	1916.3	1907.3	1913.3	1913.3
5°	1913.3	1910.3	1901.2	1910.3	1910.3
7.5°	1904.3	1901.2	1895.2	1904.3	1901.2
10°	1886.1	1886.1	1880.1	1889.2	1889.2
12.5°	1871.1	1868.0	1865.0	1877.1	1874.1
15°	1846.9	1846.9	1843.9	1859.0	1856.0
17.5°	1816.7	1819.8	1822.8	1834.8	1837.9
20°	1783.5	1789.6	1792.6	1810.7	1810.7
22.5°	1753.4	1756.4	1762.4	1780.5	1780.5
25°	1714.1	1720.2	1732.2	1747.3	1750.3
27.5°	1674.9	1677.9	1693.0	1714.1	1717.1
30°	1623.6	1632.6	1650.8	1674.9	1677.9
32.5°	1578.3	1587.4	1608.5	1632.6	1638.7
35°	1521.0	1533.1	1557.2	1587.4	1593.4
37.5°	1469.7	1478.7	1508.9	1542.1	1551.2
40°	1406.3	1424.4	1454.6	1493.8	1508.9
42.5°	1342.9	1361.0	1397.3	1448.6	1466.7
45°	1276.5	1297.7	1342.9	1400.3	1424.4
47.5°	1210.2	1234.3	1285.6	1352.0	1379.2
50°	1134.7	1164.9	1228.3	1303.7	1333.9
52.5°	1062.3	1098.5	1167.9	1252.4	1291.6
55°	986.8	1023.0	1113.6	1201.1	1243.3
57.5°	902.3	950.6	1050.2	1149.8	1195.1
60°	823.9	869.1	989.8	1098.5	1143.8
62.5°	739.4	799.7	929.5	1044.2	1089.4
65°	651.9	718.2	866.1	980.8	1026.1
67.5°	573.4	645.8	802.7	917.4	962.7
70°	479.8	570.4	733.3	848.0	893.3
72.5°	392.3	491.9	660.9	772.6	814.8
75°	307.8	419.5	585.5	685.0	706.2
77.5°	229.4	347.1	507.0	549.2	534.2
80°	163.0	277.6	395.3	374.2	383.3
82.5°	105.6	211.2	244.4	277.6	286.7
85°	60.4	123.7	150.9	163.0	169.0
87.5°	27.2	45.3	60.4	60.4	57.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)