

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: P391707

Luminaire Tested: **24CZ2-80VHE-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: P391707
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: 24CZ2-80VHE-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: 5750.2 lumens
Efficiency: N/A
Efficacy: 106.9 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

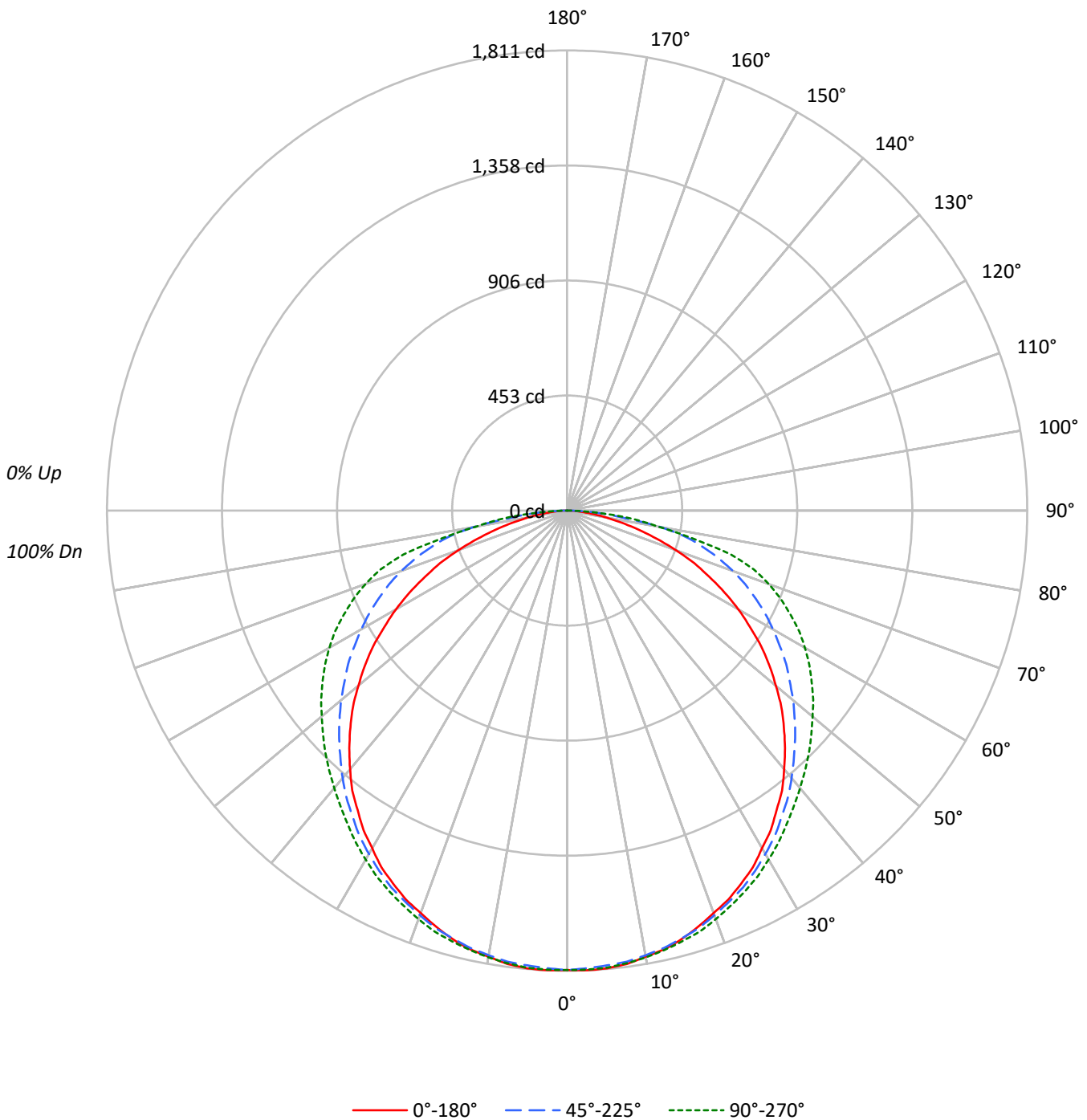
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2433	2433	2433
5°	2442	2427	2438
10°	2435	2428	2439
15°	2431	2427	2443
20°	2414	2426	2450
25°	2405	2430	2456
30°	2384	2424	2464
35°	2361	2417	2473
40°	2334	2415	2505
45°	2296	2415	2562
50°	2245	2430	2639
55°	2188	2469	2757
60°	2095	2517	2909
65°	1961	2606	3087
70°	1784	2727	3321
75°	1512	2876	3470
80°	1193	2895	2806
85°	880	2201	2465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.5	3.0
10°-20°	493.7	8.6
20°-30°	754.9	13.1
30°-40°	922.9	16.0
40°-50°	983.6	17.1
50°-60°	940.5	16.4
60°-70°	796.7	13.9
70°-80°	535.4	9.3
80°-90°	151.0	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°	1420.1	24.7
0°-40°	2343.0	40.7
0°-60°	4267.0	74.2
0°-90°	5750.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5750.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1808	1808	1808	1808	1808	
5°	1808	1805	1797	1805	1805	172
15°	1746	1746	1743	1757	1754	492
25°	1620	1626	1637	1651	1654	747
35°	1438	1449	1472	1500	1506	901
45°	1206	1226	1269	1323	1346	931
55°	933	967	1052	1135	1175	831
65°	616	679	819	927	970	612
75°	291	396	553	647	667	312
85°	57	117	143	154	160	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1808.3	1808.3	1808.3	1808.3	1808.3
2.5°	1811.1	1811.1	1802.6	1808.3	1808.3
5°	1808.3	1805.4	1796.9	1805.4	1805.4
7.5°	1799.7	1796.9	1791.2	1799.7	1796.9
10°	1782.6	1782.6	1776.9	1785.5	1785.5
12.5°	1768.3	1765.5	1762.6	1774.0	1771.2
15°	1745.5	1745.5	1742.7	1756.9	1754.1
17.5°	1717.0	1719.9	1722.7	1734.1	1737.0
20°	1685.6	1691.3	1694.2	1711.3	1711.3
22.5°	1657.1	1660.0	1665.7	1682.8	1682.8
25°	1620.0	1625.7	1637.1	1651.4	1654.3
27.5°	1583.0	1585.8	1600.1	1620.0	1622.9
30°	1534.5	1543.0	1560.1	1583.0	1585.8
32.5°	1491.7	1500.2	1520.2	1543.0	1548.7
35°	1437.5	1448.9	1471.7	1500.2	1505.9
37.5°	1389.0	1397.6	1426.1	1457.5	1466.0
40°	1329.1	1346.2	1374.7	1411.8	1426.1
42.5°	1269.2	1286.3	1320.6	1369.0	1386.2
45°	1206.5	1226.4	1269.2	1323.4	1346.2
47.5°	1143.7	1166.5	1215.0	1277.8	1303.4
50°	1072.4	1100.9	1160.8	1232.1	1260.7
52.5°	1004.0	1038.2	1103.8	1183.6	1220.7
55°	932.7	966.9	1052.4	1135.2	1175.1
57.5°	852.8	898.4	992.6	1086.7	1129.5
60°	778.6	821.4	935.5	1038.2	1081.0
62.5°	698.8	755.8	878.5	986.8	1029.6
65°	616.1	678.8	818.6	927.0	969.7
67.5°	541.9	610.4	758.7	867.1	909.8
70°	453.5	539.1	693.1	801.5	844.2
72.5°	370.8	464.9	624.6	730.2	770.1
75°	290.9	396.5	553.3	647.4	667.4
77.5°	216.8	328.0	479.2	519.1	504.8
80°	154.0	262.4	373.6	353.7	362.2
82.5°	99.8	199.7	231.0	262.4	271.0
85°	57.0	116.9	142.6	154.0	159.7
87.5°	25.7	42.8	57.0	57.0	54.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)