

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: P391611

Luminaire Tested: **24CZ2-70VHE-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: P391611
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: 24CZ2-70VHE-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: 4994.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

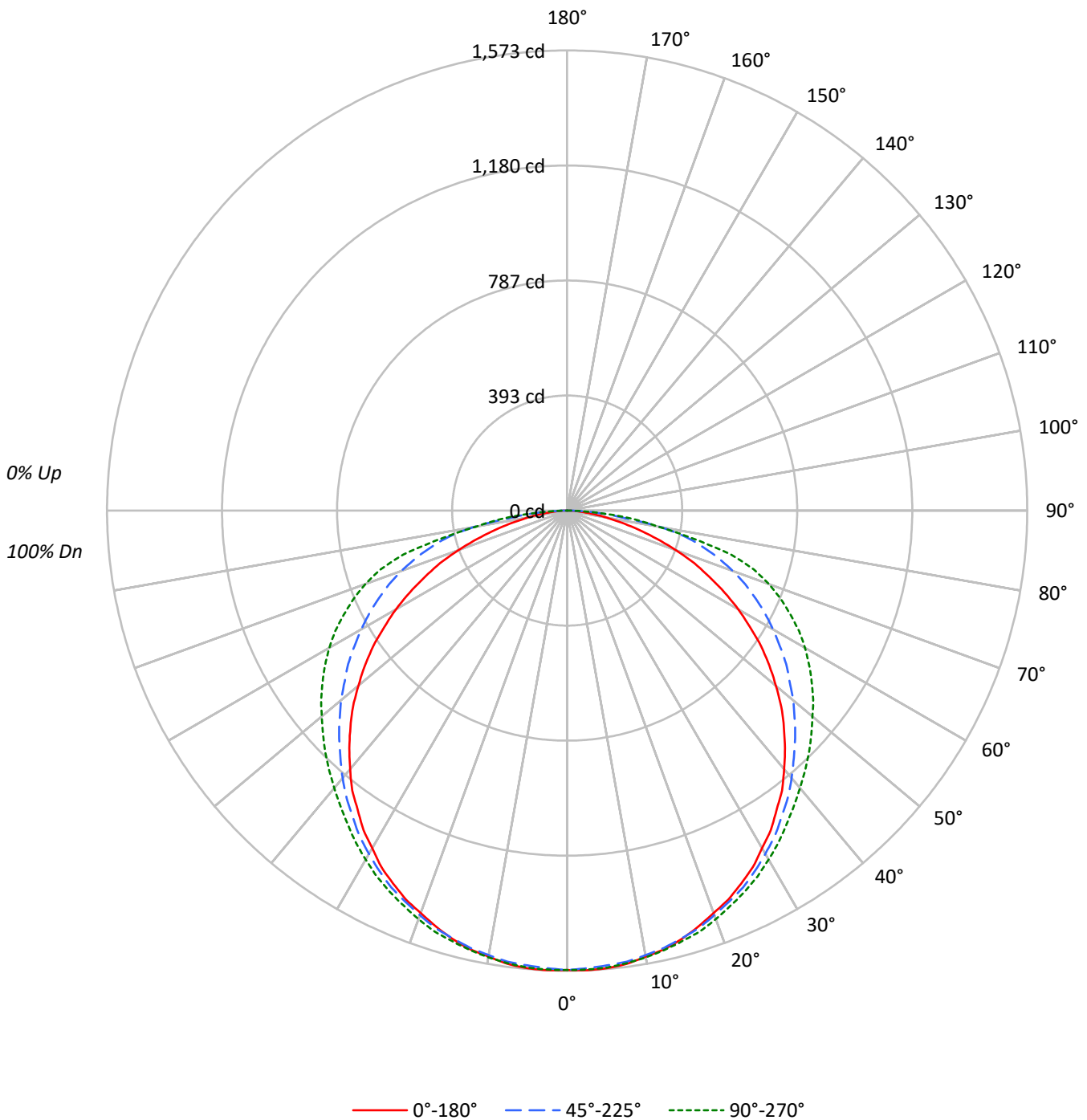
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391611

CATALOG NUMBER: 24CZ2-70VHE-HRP-UNV-L940-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P391611

CATALOG NUMBER: 24CZ2-70VHE-HRP-UNV-L940-CD1-SDWPD1-U

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°	2113	2113	2113
5°	2121	2108	2118
10°	2115	2108	2119
15°	2112	2108	2122
20°	2096	2107	2128
25°	2089	2111	2133
30°	2071	2105	2140
35°	2051	2099	2148
40°	2027	2097	2175
45°	1994	2097	2225
50°	1950	2110	2292
55°	1900	2144	2394
60°	1820	2186	2526
65°	1703	2263	2681
70°	1550	2368	2884
75°	1314	2498	3013
80°	1037	2514	2438
85°	764	1913	2141



TEST NUMBER: P391611

CATALOG NUMBER: 24CZ2-70VHE-HRP-UNV-L940-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.0	3.0
10°-20°	428.7	8.6
20°-30°	655.6	13.1
30°-40°	801.5	16.0
40°-50°	854.2	17.1
50°-60°	816.8	16.4
60°-70°	691.9	13.9
70°-80°	465.0	9.3
80°-90°	131.2	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°	1233.4	24.7
0°-40°	2034.9	40.7
0°-60°	3705.9	74.2
0°-90°	4994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1570	1570	1570	1570	1570	
5°	1570	1568	1561	1568	1568	149
15°	1516	1516	1514	1526	1523	427
25°	1407	1412	1422	1434	1437	648
35°	1248	1258	1278	1303	1308	782
45°	1048	1065	1102	1149	1169	808
55°	810	840	914	986	1021	721
65°	535	590	711	805	842	531
75°	253	344	481	562	580	271
85°	50	102	124	134	139	61
90°	0	0	0	0	0	



TEST NUMBER: P391611

CATALOG NUMBER: 24CZ2-70VHE-HRP-UNV-L940-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.5	1570.5	1570.5	1570.5	1570.5
2.5°	1572.9	1572.9	1565.5	1570.5	1570.5
5°	1570.5	1568.0	1560.6	1568.0	1568.0
7.5°	1563.0	1560.6	1555.6	1563.0	1560.6
10°	1548.2	1548.2	1543.2	1550.7	1550.7
12.5°	1535.8	1533.3	1530.8	1540.7	1538.3
15°	1516.0	1516.0	1513.5	1525.9	1523.4
17.5°	1491.2	1493.7	1496.2	1506.1	1508.5
20°	1464.0	1468.9	1471.4	1486.2	1486.2
22.5°	1439.2	1441.7	1446.6	1461.5	1461.5
25°	1407.0	1411.9	1421.8	1434.2	1436.7
27.5°	1374.8	1377.3	1389.6	1407.0	1409.5
30°	1332.7	1340.1	1355.0	1374.8	1377.3
32.5°	1295.5	1302.9	1320.3	1340.1	1345.1
35°	1248.4	1258.4	1278.2	1302.9	1307.9
37.5°	1206.3	1213.8	1238.5	1265.8	1273.2
40°	1154.3	1169.2	1194.0	1226.2	1238.5
42.5°	1102.3	1117.2	1146.9	1189.0	1203.9
45°	1047.8	1065.1	1102.3	1149.4	1169.2
47.5°	993.3	1013.1	1055.2	1109.7	1132.0
50°	931.4	956.2	1008.2	1070.1	1094.9
52.5°	871.9	901.7	958.6	1028.0	1060.2
55°	810.0	839.7	914.0	985.9	1020.6
57.5°	740.6	780.3	862.0	943.8	980.9
60°	676.2	713.4	812.5	901.7	938.8
62.5°	606.9	656.4	762.9	857.1	894.2
65°	535.0	589.5	710.9	805.1	842.2
67.5°	470.6	530.1	658.9	753.0	790.2
70°	393.9	468.2	601.9	696.1	733.2
72.5°	322.0	403.8	542.5	634.1	668.8
75°	252.7	344.3	480.6	562.3	579.6
77.5°	188.3	284.9	416.1	450.8	438.4
80°	133.8	227.9	324.5	307.2	314.6
82.5°	86.7	173.4	200.6	227.9	235.3
85°	49.5	101.6	123.9	133.8	138.7
87.5°	22.3	37.2	49.5	49.5	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)