

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: P388903

Luminaire Tested: **24CZ2-60-SQR-UNV-L940-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: P388903
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60-SQR-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4895.3 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

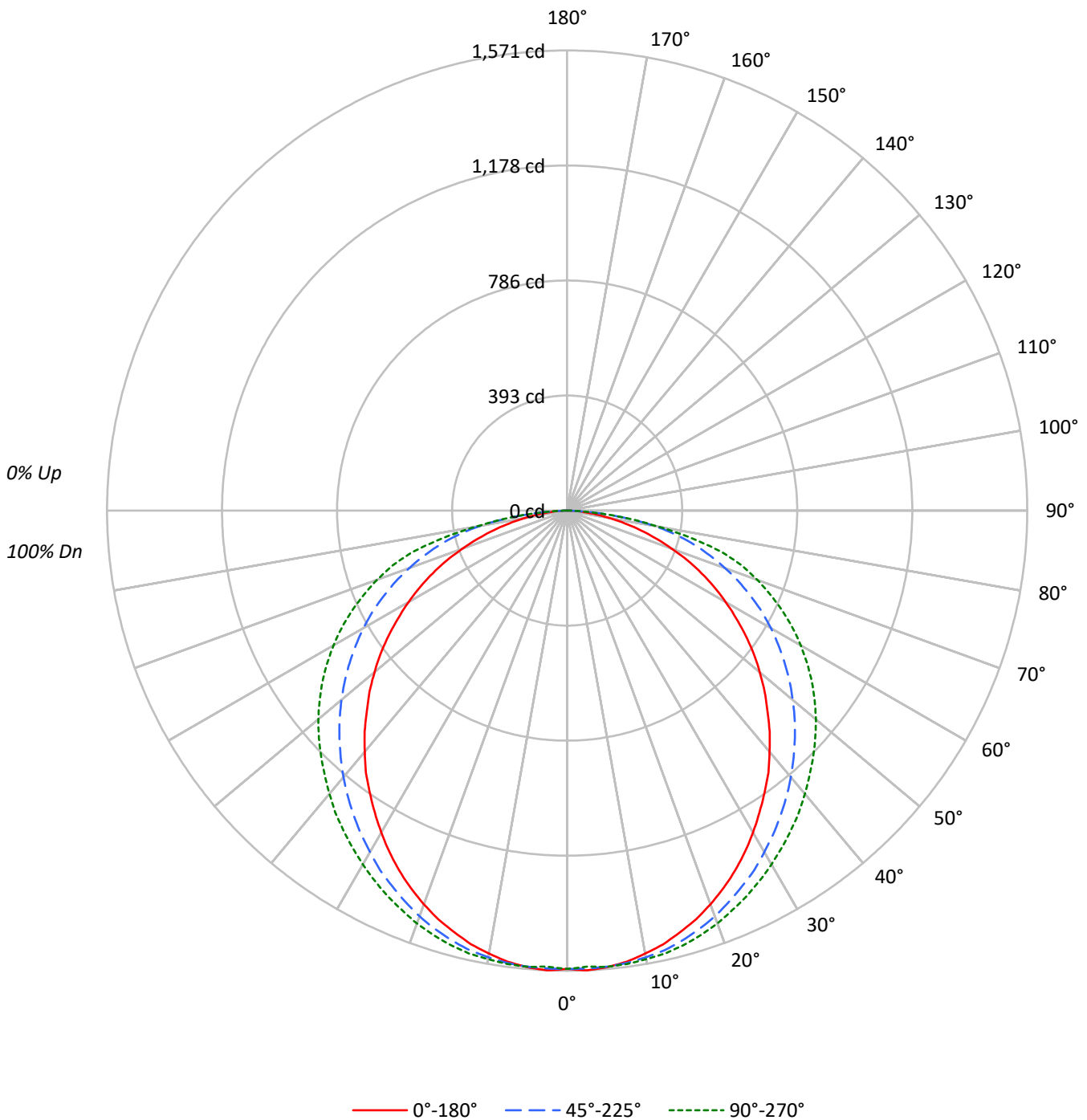
Input Watts (W): 55.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388903

CATALOG NUMBER: 24CZ2-60-SQR-UNV-L940-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388903

CATALOG NUMBER: 24CZ2-60-SQR-UNV-L940-CD1-SWPD1-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	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2105	2105	2105
5°	2113	2111	2111
10°	2098	2116	2125
15°	2076	2117	2139
20°	2048	2111	2148
25°	2013	2100	2155
30°	1972	2092	2167
35°	1930	2087	2188
40°	1888	2087	2217
45°	1839	2092	2261
50°	1797	2105	2321
55°	1744	2127	2393
60°	1683	2162	2479
65°	1611	2203	2584
70°	1495	2258	2715
75°	1353	2336	2840
80°	1140	2342	2442
85°	874	1772	1772



TEST NUMBER: P388903

CATALOG NUMBER: 24CZ2-60-SQR-UNV-L940-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.0
10°-20°	427.3	8.7
20°-30°	649.1	13.3
30°-40°	789.6	16.1
40°-50°	840.6	17.2
50°-60°	800.7	16.4
60°-70°	669.6	13.7
70°-80°	446.4	9.1
80°-90°	123.5	2.5
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°	1225.0	25.0
0°-40°	2014.5	41.2
0°-60°	3655.8	74.7
0°-90°	4895.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4895.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1565	1555	1563	1563	1563	148
15°	1490	1494	1520	1531	1536	420
25°	1356	1374	1414	1439	1452	624
35°	1175	1209	1271	1313	1332	735
45°	967	1018	1099	1161	1188	747
55°	744	808	907	986	1020	665
65°	506	580	692	778	812	500
75°	260	343	449	525	546	276
85°	57	105	115	113	115	68
90°	0	0	0	0	0	



TEST NUMBER: P388903

CATALOG NUMBER: 24CZ2-60-SQR-UNV-L940-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1564.8	1564.8	1564.8	1564.8	1564.8
2.5°	1571.2	1559.9	1564.8	1564.8	1558.3
5°	1564.8	1555.1	1563.2	1563.2	1563.2
7.5°	1553.5	1545.4	1558.3	1561.5	1561.5
10°	1535.7	1532.4	1548.6	1553.5	1555.1
12.5°	1516.3	1514.7	1537.3	1543.8	1548.6
15°	1490.4	1493.6	1519.5	1530.8	1535.7
17.5°	1462.9	1469.4	1498.5	1514.7	1519.5
20°	1430.6	1440.3	1474.3	1490.4	1500.1
22.5°	1395.0	1409.6	1445.2	1464.6	1475.9
25°	1356.2	1374.0	1414.4	1438.7	1451.6
27.5°	1314.2	1336.8	1383.7	1411.2	1424.1
30°	1269.0	1294.8	1346.5	1378.9	1395.0
32.5°	1222.1	1252.8	1309.4	1344.9	1364.3
35°	1175.2	1209.1	1270.6	1312.6	1332.0
37.5°	1128.3	1162.3	1230.2	1275.4	1299.7
40°	1075.0	1115.4	1188.1	1238.2	1262.5
42.5°	1023.2	1066.9	1144.5	1199.4	1225.3
45°	966.7	1018.4	1099.2	1160.7	1188.1
47.5°	914.9	966.7	1054.0	1118.6	1149.3
50°	858.4	913.3	1005.5	1076.6	1108.9
52.5°	803.4	860.0	957.0	1032.9	1065.3
55°	743.6	808.3	906.9	986.1	1020.0
57.5°	683.8	753.3	855.1	937.6	971.5
60°	625.6	696.7	803.4	885.8	921.4
62.5°	567.4	638.5	750.1	834.1	868.1
65°	506.0	580.3	691.9	777.5	811.5
67.5°	444.5	522.1	633.7	719.3	751.7
70°	379.9	462.3	573.9	657.9	690.2
72.5°	320.1	402.5	512.4	594.9	625.6
75°	260.3	342.7	449.4	525.4	546.4
77.5°	202.1	284.5	379.9	430.0	434.8
80°	147.1	224.7	302.3	316.8	315.2
82.5°	98.6	168.1	208.5	210.1	215.0
85°	56.6	105.1	114.8	113.2	114.8
87.5°	22.6	37.2	32.3	24.2	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)