

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: P230086

Luminaire Tested: **24CZ-LD5-50SE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-50SE-S-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4577.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

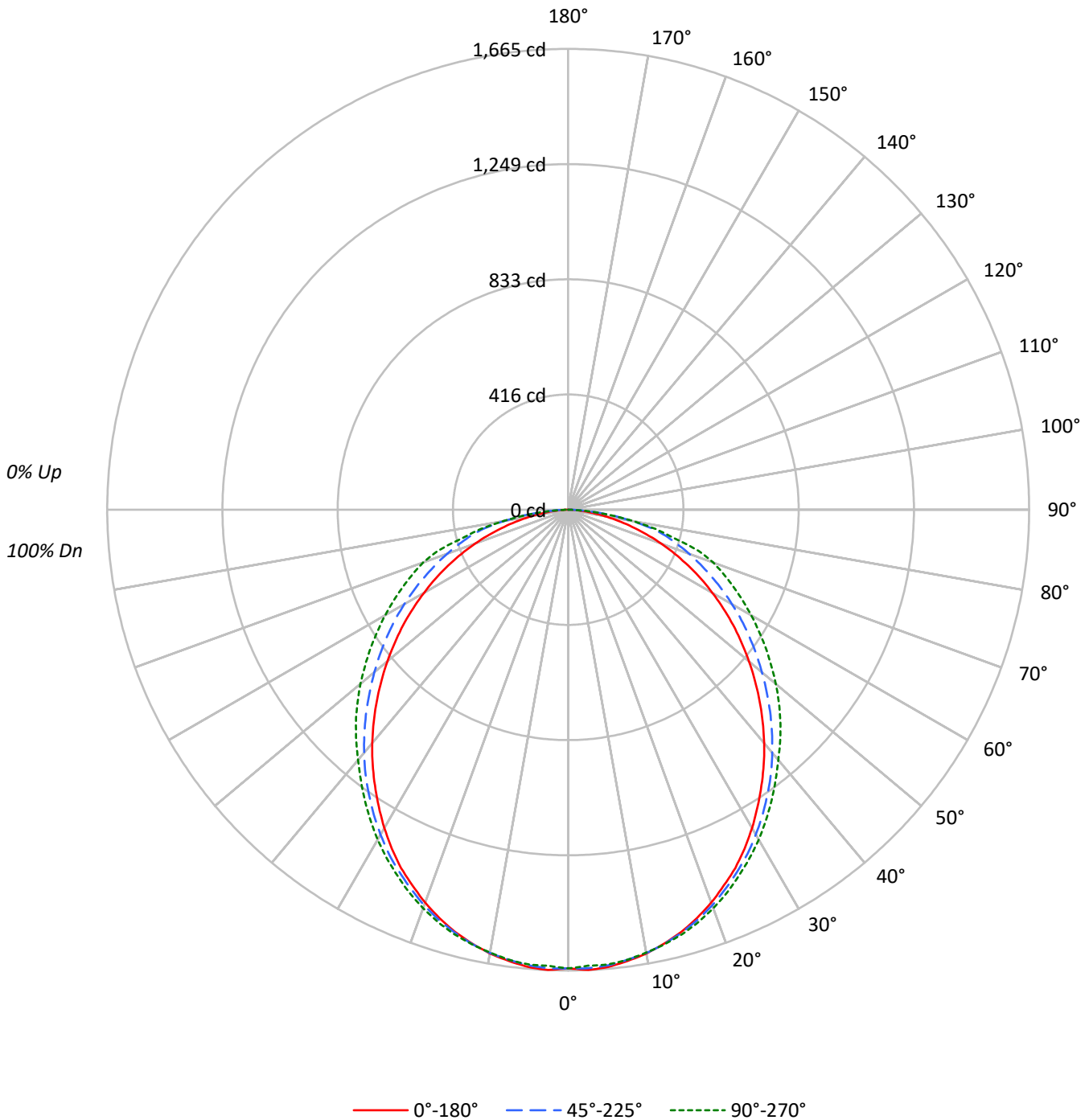
Input Watts (W): 46.56
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2229	2229	2229
5°	2240	2232	2228
10°	2224	2222	2220
15°	2200	2204	2213
20°	2163	2178	2194
25°	2121	2143	2166
30°	2063	2106	2139
35°	1999	2061	2104
40°	1934	2014	2073
45°	1860	1962	2063
50°	1785	1913	2050
55°	1708	1872	2043
60°	1619	1840	2053
65°	1522	1818	2095
70°	1402	1827	2193
75°	1243	1892	2043
80°	1038	1794	1841
85°	777	1434	1317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.7	3.4
10°-20°	445.5	9.7
20°-30°	664.0	14.5
30°-40°	781.6	17.1
40°-50°	794.3	17.4
50°-60°	714.1	15.6
60°-70°	564.2	12.3
70°-80°	357.9	7.8
80°-90°	98.8	2.2
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°	1266.2	27.7
0°-40°	2047.8	44.7
0°-60°	3556.2	77.7
0°-90°	4577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4577.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1657	1657	1657	1657	1657	
5°	1658	1645	1652	1649	1649	157
15°	1579	1572	1582	1587	1588	445
25°	1428	1427	1444	1453	1459	657
35°	1217	1224	1255	1269	1281	761
45°	978	991	1031	1062	1084	754
55°	728	746	798	850	871	650
65°	478	503	571	634	658	474
75°	239	280	364	396	393	255
85°	50	87	93	85	85	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1657.0	1657.0	1657.0	1657.0	1657.0
2.5°	1664.6	1652.4	1658.5	1655.4	1649.3
5°	1658.5	1644.8	1652.4	1649.3	1649.3
7.5°	1644.8	1634.1	1640.2	1638.7	1640.2
10°	1628.0	1617.4	1626.5	1626.5	1625.0
12.5°	1605.2	1596.0	1606.7	1606.7	1608.2
15°	1579.3	1571.7	1582.3	1586.9	1588.4
17.5°	1547.3	1539.7	1553.4	1558.0	1562.5
20°	1510.8	1507.7	1521.4	1526.0	1532.1
22.5°	1469.6	1469.6	1483.3	1489.4	1498.6
25°	1428.5	1427.0	1443.7	1452.9	1459.0
27.5°	1379.8	1381.3	1402.6	1411.8	1419.4
30°	1328.0	1331.0	1355.4	1366.1	1376.7
32.5°	1273.2	1279.3	1306.7	1318.9	1329.5
35°	1216.8	1224.4	1254.9	1268.6	1280.8
37.5°	1160.5	1171.1	1203.1	1216.8	1230.5
40°	1101.1	1110.2	1146.8	1163.5	1180.3
42.5°	1040.2	1052.4	1088.9	1113.3	1133.1
45°	977.7	991.4	1031.0	1061.5	1084.3
47.5°	915.3	933.6	971.6	1012.8	1032.6
50°	852.8	871.1	913.8	959.5	979.3
52.5°	788.9	807.2	855.9	903.1	924.4
55°	728.0	746.2	798.0	849.8	871.1
57.5°	664.0	683.8	741.7	795.0	816.3
60°	601.6	621.4	683.8	740.1	763.0
62.5°	540.6	562.0	627.5	686.8	709.7
65°	478.2	502.6	571.1	633.5	657.9
67.5°	417.3	444.7	516.3	581.8	607.7
70°	356.4	388.3	464.5	531.5	557.4
72.5°	297.0	332.0	412.7	479.7	493.4
75°	239.1	280.2	364.0	396.0	392.9
77.5°	184.3	230.0	309.2	315.2	324.4
80°	134.0	184.3	231.5	243.7	237.6
82.5°	88.3	138.6	166.0	159.9	158.4
85°	50.3	86.8	92.9	85.3	85.3
87.5°	21.3	35.0	30.5	22.8	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)