

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: P388759

Luminaire Tested: **24CZ2-50-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: P388759
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: 24CZ2-50-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: 4063.2 lumens
Efficiency: N/A
Efficacy: 83.6 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

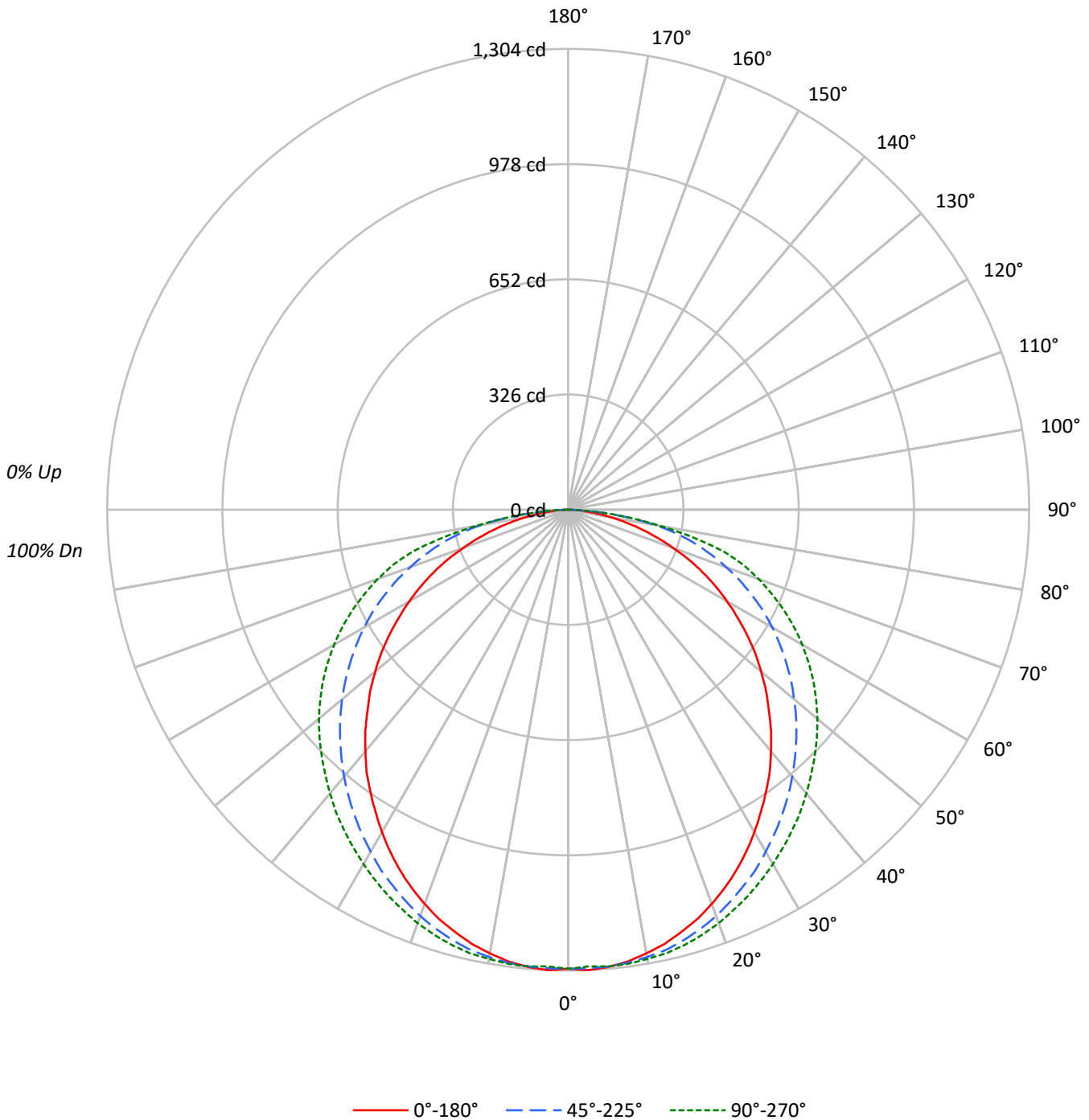
Input Watts (W): 48.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1748	1748	1748
5°	1754	1752	1752
10°	1741	1756	1763
15°	1723	1757	1775
20°	1700	1752	1783
25°	1671	1743	1789
30°	1636	1737	1799
35°	1602	1732	1816
40°	1567	1732	1841
45°	1527	1736	1877
50°	1491	1747	1927
55°	1448	1766	1986
60°	1397	1794	2058
65°	1337	1828	2144
70°	1240	1874	2254
75°	1123	1939	2358
80°	946	1944	2027
85°	726	1471	1471



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.3	3.0
10°-20°	354.7	8.7
20°-30°	538.8	13.3
30°-40°	655.3	16.1
40°-50°	697.7	17.2
50°-60°	664.6	16.4
60°-70°	555.8	13.7
70°-80°	370.5	9.1
80°-90°	102.5	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°	1016.8	25.0
0°-40°	1672.1	41.2
0°-60°	3034.4	74.7
0°-90°	4063.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4063.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1299	1291	1298	1298	1298	123
15°	1237	1240	1261	1271	1275	349
25°	1126	1140	1174	1194	1205	518
35°	975	1004	1055	1090	1106	610
45°	802	845	912	963	986	620
55°	617	671	753	818	847	552
65°	420	482	574	645	674	415
75°	216	284	373	436	454	229
85°	47	87	95	94	95	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1298.8	1298.8	1298.8	1298.8	1298.8
2.5°	1304.2	1294.8	1298.8	1298.8	1293.4
5°	1298.8	1290.7	1297.5	1297.5	1297.5
7.5°	1289.4	1282.7	1293.4	1296.1	1296.1
10°	1274.6	1272.0	1285.4	1289.4	1290.7
12.5°	1258.5	1257.2	1276.0	1281.4	1285.4
15°	1237.1	1239.8	1261.2	1270.6	1274.6
17.5°	1214.3	1219.6	1243.8	1257.2	1261.2
20°	1187.4	1195.5	1223.7	1237.1	1245.1
22.5°	1157.9	1170.0	1199.5	1215.6	1225.0
25°	1125.7	1140.5	1174.0	1194.1	1204.9
27.5°	1090.8	1109.6	1148.5	1171.3	1182.1
30°	1053.3	1074.7	1117.7	1144.5	1157.9
32.5°	1014.3	1039.8	1086.8	1116.3	1132.4
35°	975.4	1003.6	1054.6	1089.5	1105.6
37.5°	936.5	964.7	1021.1	1058.6	1078.8
40°	892.3	925.8	986.2	1027.8	1047.9
42.5°	849.3	885.5	949.9	995.6	1017.0
45°	802.4	845.3	912.4	963.4	986.2
47.5°	759.4	802.4	874.8	928.5	954.0
50°	712.5	758.1	834.6	893.6	920.4
52.5°	666.8	713.8	794.3	857.4	884.2
55°	617.2	670.9	752.7	818.5	846.6
57.5°	567.6	625.2	709.8	778.2	806.4
60°	519.3	578.3	666.8	735.3	764.8
62.5°	470.9	530.0	622.6	692.3	720.5
65°	420.0	481.7	574.3	645.4	673.5
67.5°	369.0	433.4	526.0	597.1	623.9
70°	315.3	383.7	476.3	546.1	572.9
72.5°	265.7	334.1	425.3	493.8	519.3
75°	216.0	284.4	373.0	436.1	453.5
77.5°	167.7	236.1	315.3	356.9	360.9
80°	122.1	186.5	250.9	263.0	261.6
82.5°	81.8	139.5	173.1	174.4	178.5
85°	47.0	87.2	95.3	93.9	95.3
87.5°	18.8	30.9	26.8	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)