

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: P388618

Luminaire Tested: **24CZ2-40-SQR-UNV-L950-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: P388618
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: 24CZ2-40-SQR-UNV-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3608.5 lumens
Efficiency: N/A
Efficacy: 99.7 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

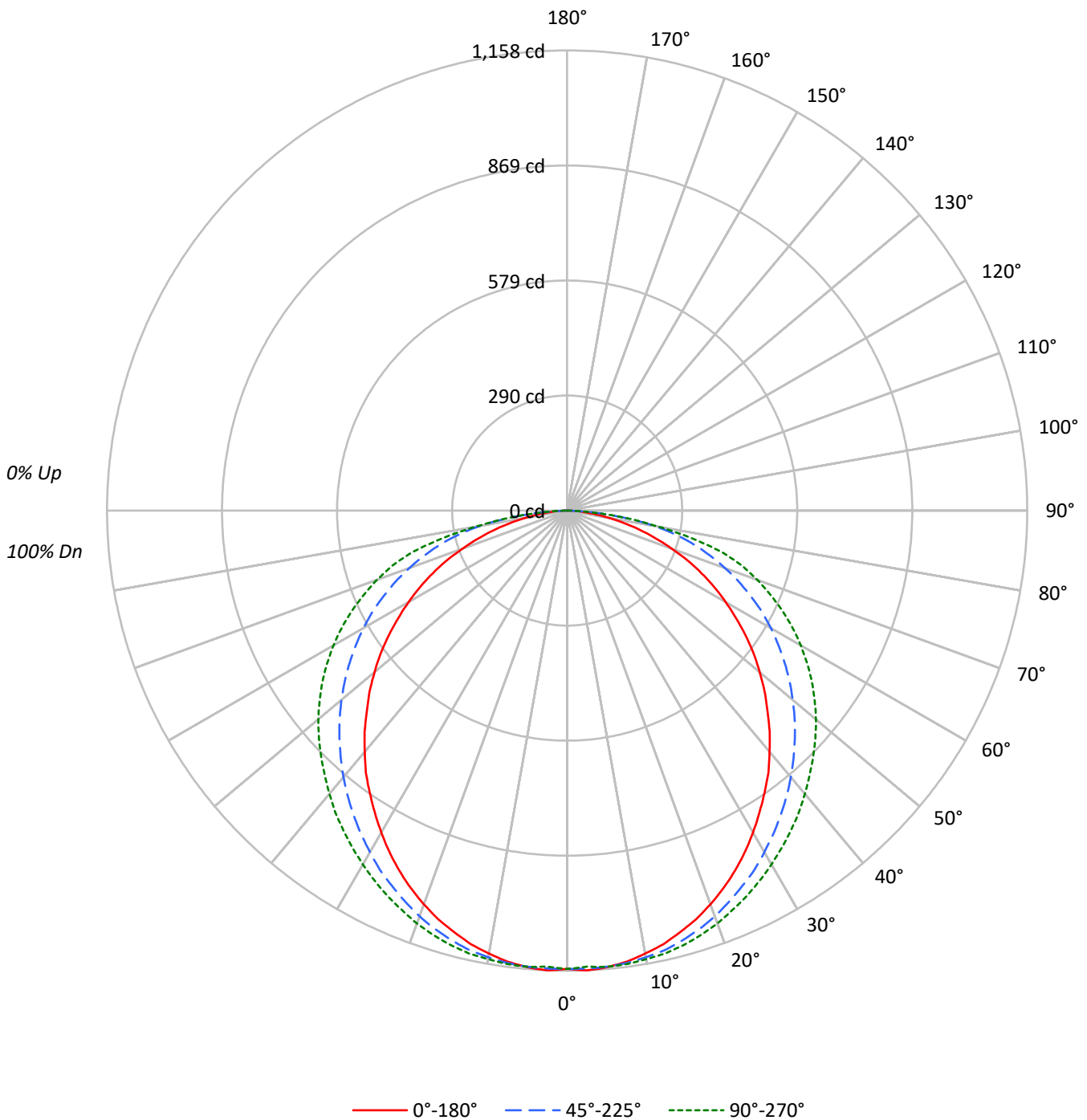
Input Watts (W): 36.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1552	1552	1552
5°	1558	1556	1556
10°	1547	1560	1566
15°	1530	1560	1577
20°	1510	1556	1583
25°	1484	1548	1589
30°	1453	1542	1598
35°	1423	1538	1613
40°	1392	1538	1635
45°	1356	1542	1666
50°	1324	1551	1711
55°	1286	1568	1764
60°	1241	1594	1828
65°	1188	1624	1904
70°	1102	1664	2002
75°	997	1722	2094
80°	840	1726	1801
85°	644	1306	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	3.0
10°-20°	315.0	8.7
20°-30°	478.5	13.3
30°-40°	582.0	16.1
40°-50°	619.7	17.2
50°-60°	590.2	16.4
60°-70°	493.6	13.7
70°-80°	329.1	9.1
80°-90°	91.1	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°	903.0	25.0
0°-40°	1485.0	41.2
0°-60°	2694.8	74.7
0°-90°	3608.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3608.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1154	1154	1154	1154	1154	
5°	1154	1146	1152	1152	1152	109
15°	1099	1101	1120	1128	1132	310
25°	1000	1013	1043	1060	1070	460
35°	866	891	937	968	982	542
45°	713	751	810	856	876	551
55°	548	596	668	727	752	490
65°	373	428	510	573	598	368
75°	192	253	331	387	403	203
85°	42	78	85	83	85	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1153.5	1153.5	1153.5	1153.5	1153.5
2.5°	1158.2	1149.9	1153.5	1153.5	1148.7
5°	1153.5	1146.3	1152.3	1152.3	1152.3
7.5°	1145.1	1139.2	1148.7	1151.1	1151.1
10°	1132.0	1129.6	1141.5	1145.1	1146.3
12.5°	1117.7	1116.5	1133.2	1138.0	1141.5
15°	1098.6	1101.0	1120.1	1128.4	1132.0
17.5°	1078.4	1083.1	1104.6	1116.5	1120.1
20°	1054.6	1061.7	1086.7	1098.6	1105.8
22.5°	1028.3	1039.1	1065.3	1079.6	1087.9
25°	999.7	1012.8	1042.6	1060.5	1070.0
27.5°	968.8	985.4	1020.0	1040.3	1049.8
30°	935.4	954.5	992.6	1016.4	1028.3
32.5°	900.8	923.5	965.2	991.4	1005.7
35°	866.3	891.3	936.6	967.6	981.9
37.5°	831.7	856.7	906.8	940.2	958.0
40°	792.4	822.2	875.8	912.8	930.6
42.5°	754.3	786.4	843.6	884.2	903.2
45°	712.6	750.7	810.3	855.6	875.8
47.5°	674.4	712.6	776.9	824.6	847.2
50°	632.7	673.2	741.2	793.6	817.4
52.5°	592.2	633.9	705.4	761.4	785.3
55°	548.1	595.8	668.5	726.9	751.9
57.5°	504.0	555.3	630.3	691.1	716.1
60°	461.1	513.6	592.2	653.0	679.2
62.5°	418.2	470.7	552.9	614.9	639.9
65°	373.0	427.8	510.0	573.2	598.2
67.5°	327.7	384.9	467.1	530.3	554.1
70°	280.0	340.8	423.0	485.0	508.8
72.5°	235.9	296.7	377.7	438.5	461.1
75°	191.8	252.6	331.3	387.3	402.8
77.5°	148.9	209.7	280.0	317.0	320.5
80°	108.4	165.6	222.8	233.6	232.4
82.5°	72.7	123.9	153.7	154.9	158.5
85°	41.7	77.5	84.6	83.4	84.6
87.5°	16.7	27.4	23.8	17.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)