

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: P388617

Luminaire Tested: **24CZ2-40-SQR-UNV-L950-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: P388617  
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-SDWPD1-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: 3565.0 lumens  
Efficiency: N/A  
Efficacy: 98.5 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

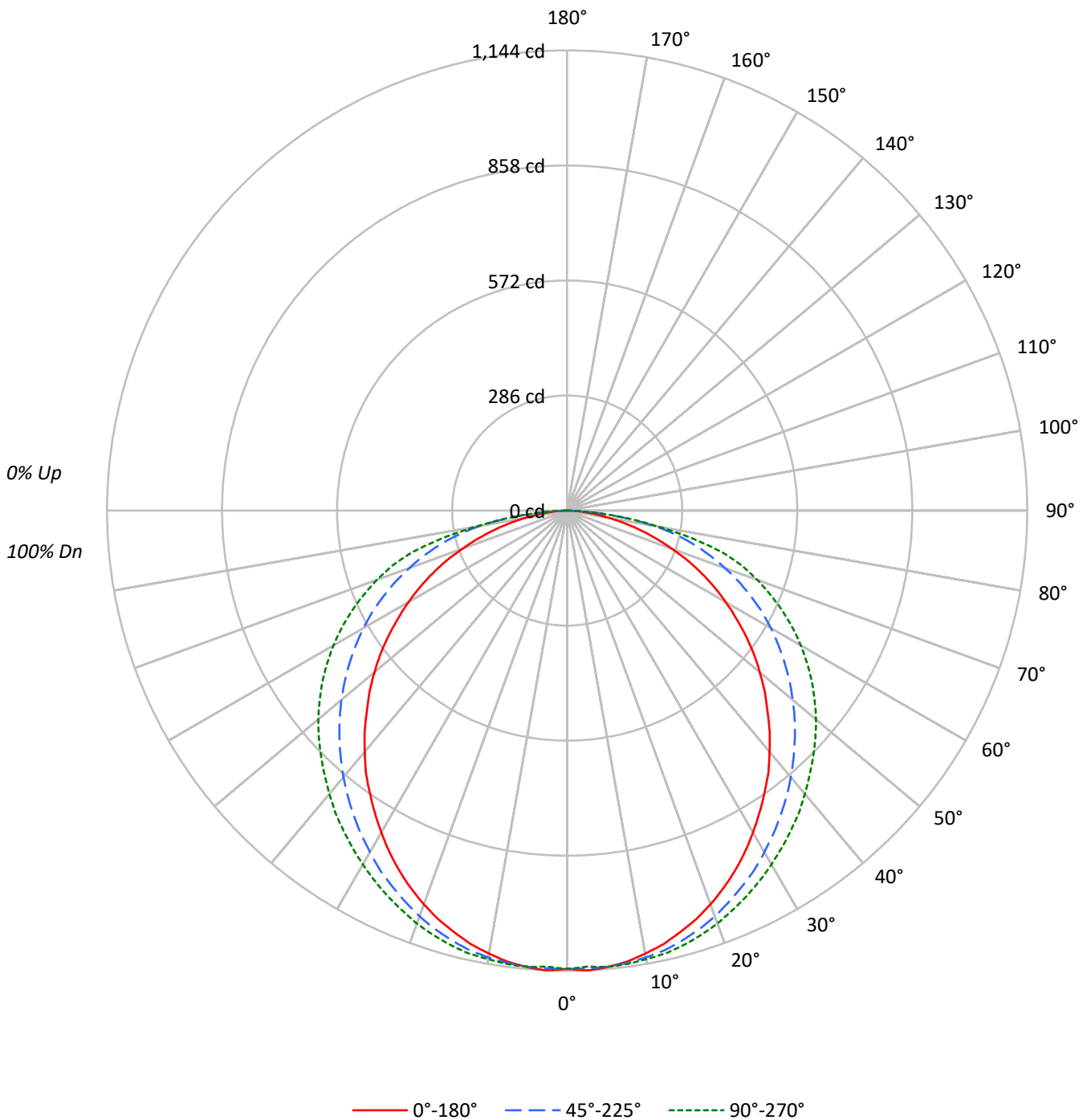
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1533	1533	1533
5°	1539	1538	1538
10°	1528	1541	1547
15°	1512	1541	1558
20°	1492	1537	1564
25°	1466	1529	1569
30°	1436	1523	1578
35°	1406	1520	1593
40°	1375	1520	1615
45°	1340	1523	1647
50°	1308	1533	1690
55°	1270	1549	1742
60°	1226	1574	1806
65°	1173	1604	1882
70°	1088	1644	1978
75°	985	1701	2069
80°	830	1705	1779
85°	636	1291	1291



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.2	3.0
10°-20°	311.2	8.7
20°-30°	472.7	13.3
30°-40°	575.0	16.1
40°-50°	612.2	17.2
50°-60°	583.1	16.4
60°-70°	487.6	13.7
70°-80°	325.1	9.1
80°-90°	90.0	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°	892.1	25.0
0°-40°	1467.1	41.2
0°-60°	2662.3	74.7
0°-90°	3565.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3565.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1140	1132	1138	1138	1138	108
15°	1085	1088	1107	1115	1118	306
25°	988	1001	1030	1048	1057	455
35°	856	881	925	956	970	536
45°	704	742	800	845	865	544
55°	542	589	660	718	743	484
65°	368	423	504	566	591	364
75°	190	250	327	383	398	201
85°	41	76	84	82	84	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1139.5	1139.5	1139.5	1139.5	1139.5
2.5°	1144.3	1136.0	1139.5	1139.5	1134.8
5°	1139.5	1132.5	1138.4	1138.4	1138.4
7.5°	1131.3	1125.4	1134.8	1137.2	1137.2
10°	1118.4	1116.0	1127.8	1131.3	1132.5
12.5°	1104.2	1103.1	1119.5	1124.2	1127.8
15°	1085.4	1087.7	1106.6	1114.8	1118.4
17.5°	1065.4	1070.1	1091.3	1103.1	1106.6
20°	1041.8	1048.9	1073.6	1085.4	1092.5
22.5°	1015.9	1026.5	1052.4	1066.6	1074.8
25°	987.7	1000.6	1030.1	1047.7	1057.1
27.5°	957.1	973.6	1007.7	1027.7	1037.1
30°	924.1	943.0	980.6	1004.2	1015.9
32.5°	890.0	912.3	953.5	979.4	993.6
35°	855.8	880.6	925.3	955.9	970.0
37.5°	821.7	846.4	895.9	928.8	946.5
40°	782.9	812.3	865.3	901.7	919.4
42.5°	745.2	777.0	833.5	873.5	892.3
45°	704.0	741.6	800.5	845.2	865.3
47.5°	666.3	704.0	767.5	814.6	837.0
50°	625.1	665.1	732.2	784.0	807.6
52.5°	585.1	626.3	696.9	752.2	775.8
55°	541.5	588.6	660.4	718.1	742.8
57.5°	498.0	548.6	622.7	682.8	707.5
60°	455.6	507.4	585.1	645.1	671.0
62.5°	413.2	465.0	546.2	607.4	632.2
65°	368.5	422.6	503.8	566.2	591.0
67.5°	323.7	380.2	461.5	523.9	547.4
70°	276.6	336.7	417.9	479.1	502.7
72.5°	233.1	293.1	373.2	433.2	455.6
75°	189.5	249.6	327.3	382.6	397.9
77.5°	147.2	207.2	276.6	313.1	316.7
80°	107.1	163.6	220.1	230.7	229.6
82.5°	71.8	122.4	151.9	153.0	156.6
85°	41.2	76.5	83.6	82.4	83.6
87.5°	16.5	27.1	23.5	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)