

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: P388687

Luminaire Tested: **24CZ2-45-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: P388687
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: 24CZ2-45-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: 3741.5 lumens
Efficiency: N/A
Efficacy: 87.2 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

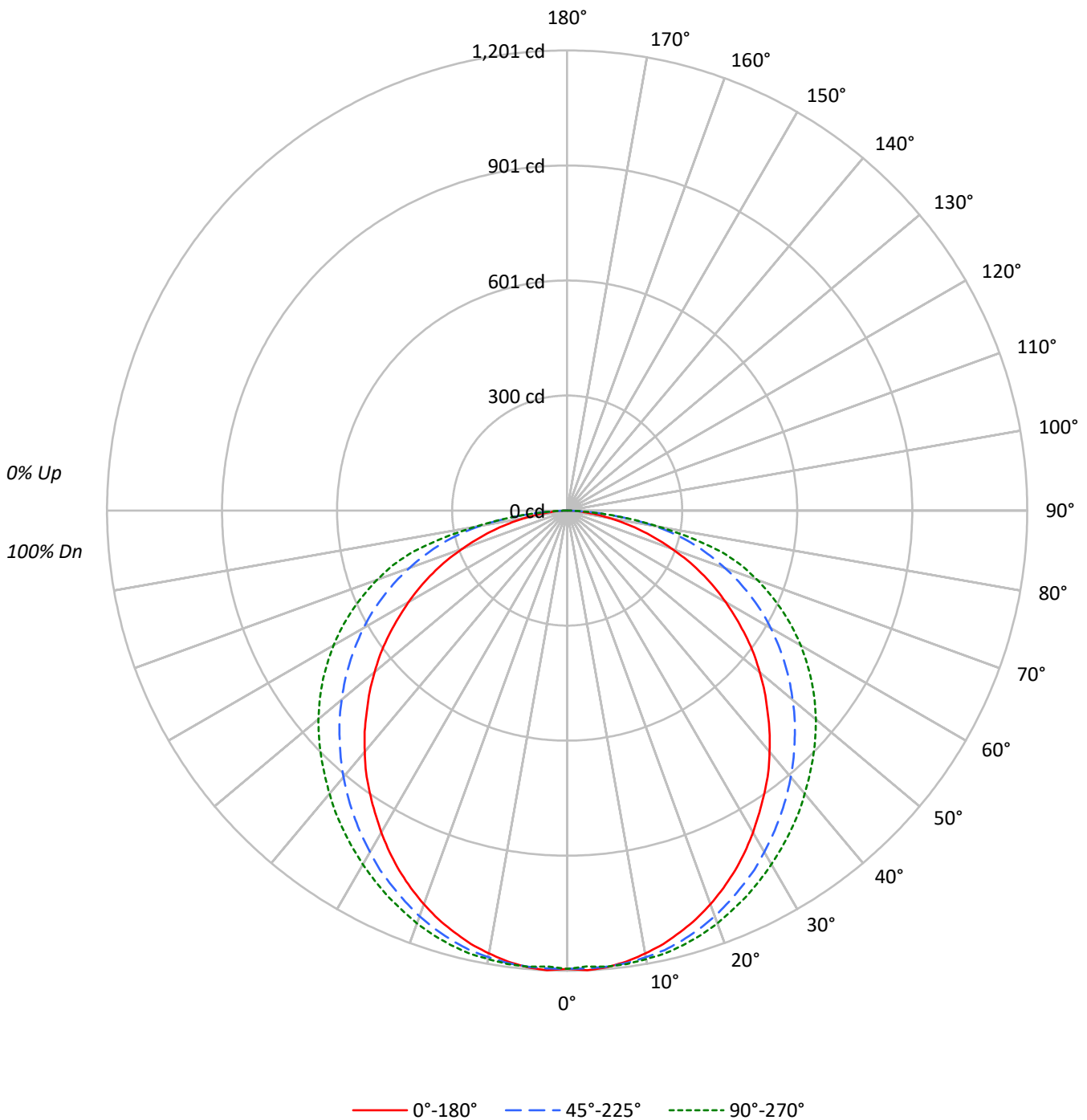
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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°	1609	1609	1609
5°	1615	1614	1614
10°	1604	1617	1624
15°	1587	1618	1635
20°	1566	1613	1642
25°	1539	1605	1647
30°	1507	1599	1656
35°	1475	1595	1672
40°	1443	1595	1695
45°	1406	1599	1728
50°	1373	1609	1774
55°	1333	1626	1829
60°	1287	1652	1895
65°	1231	1684	1975
70°	1142	1725	2076
75°	1034	1786	2171
80°	871	1790	1867
85°	667	1354	1354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	3.0
10°-20°	326.6	8.7
20°-30°	496.1	13.3
30°-40°	603.5	16.1
40°-50°	642.5	17.2
50°-60°	611.9	16.4
60°-70°	511.8	13.7
70°-80°	341.2	9.1
80°-90°	94.4	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°	936.3	25.0
0°-40°	1539.7	41.2
0°-60°	2794.1	74.7
0°-90°	3741.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3741.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1189	1195	1195	1195	113
15°	1139	1142	1161	1170	1174	321
25°	1037	1050	1081	1100	1110	477
35°	898	924	971	1003	1018	562
45°	739	778	840	887	908	571
55°	568	618	693	754	780	508
65°	387	444	529	594	620	382
75°	199	262	344	402	418	211
85°	43	80	88	86	88	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1196.0	1196.0	1196.0	1196.0	1196.0
2.5°	1200.9	1192.3	1196.0	1196.0	1191.0
5°	1196.0	1188.6	1194.7	1194.7	1194.7
7.5°	1187.3	1181.1	1191.0	1193.5	1193.5
10°	1173.7	1171.3	1183.6	1187.3	1188.6
12.5°	1158.9	1157.7	1175.0	1179.9	1183.6
15°	1139.1	1141.6	1161.4	1170.0	1173.7
17.5°	1118.1	1123.1	1145.3	1157.7	1161.4
20°	1093.4	1100.8	1126.8	1139.1	1146.5
22.5°	1066.2	1077.4	1104.5	1119.4	1128.0
25°	1036.6	1050.2	1081.1	1099.6	1109.5
27.5°	1004.5	1021.8	1057.6	1078.6	1088.5
30°	969.9	989.6	1029.2	1053.9	1066.2
32.5°	934.0	957.5	1000.8	1027.9	1042.8
35°	898.2	924.2	971.1	1003.2	1018.1
37.5°	862.4	888.3	940.2	974.8	993.3
40°	821.6	852.5	908.1	946.4	964.9
42.5°	782.1	815.4	874.7	916.7	936.5
45°	738.8	778.4	840.1	887.1	908.1
47.5°	699.3	738.8	805.5	855.0	878.4
50°	656.1	698.1	768.5	822.8	847.6
52.5°	614.0	657.3	731.4	789.5	814.2
55°	568.3	617.8	693.1	753.7	779.6
57.5°	522.6	575.7	653.6	716.6	742.5
60°	478.1	532.5	614.0	677.1	704.2
62.5°	433.7	488.0	573.3	637.5	663.5
65°	386.7	443.5	528.8	594.3	620.2
67.5°	339.8	399.1	484.3	549.8	574.5
70°	290.3	353.4	438.6	502.8	527.6
72.5°	244.6	307.6	391.7	454.7	478.1
75°	198.9	261.9	343.5	401.5	417.6
77.5°	154.4	217.4	290.3	328.6	332.3
80°	112.4	171.7	231.0	242.2	240.9
82.5°	75.4	128.5	159.4	160.6	164.3
85°	43.2	80.3	87.7	86.5	87.7
87.5°	17.3	28.4	24.7	18.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)