

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: P388688

Luminaire Tested: **24CZ2-45-SQR-UNV-L940-CD1-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: P388688
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-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

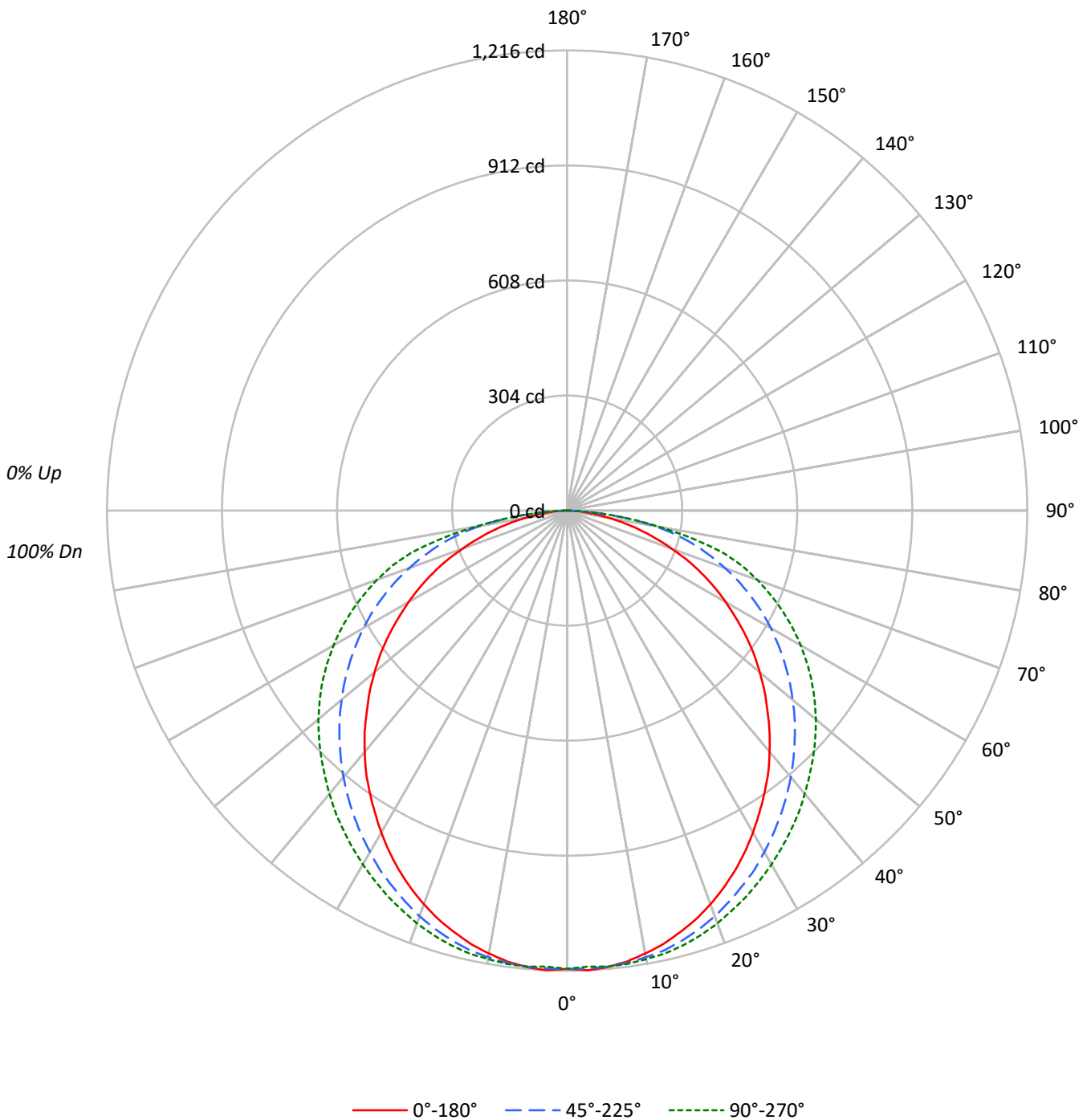
Lumens per Lamp: N/A
Luminaire Lumens: 3788.5 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	
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°	1629	1629	1629
5°	1636	1634	1634
10°	1624	1637	1644
15°	1607	1638	1656
20°	1585	1634	1662
25°	1558	1625	1668
30°	1526	1619	1677
35°	1494	1615	1693
40°	1461	1615	1716
45°	1423	1619	1750
50°	1391	1629	1796
55°	1350	1646	1852
60°	1303	1673	1919
65°	1247	1705	1999
70°	1157	1747	2102
75°	1047	1808	2198
80°	882	1812	1890
85°	676	1371	1371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.0	3.0
10°-20°	330.7	8.7
20°-30°	502.3	13.3
30°-40°	611.0	16.1
40°-50°	650.6	17.2
50°-60°	619.6	16.4
60°-70°	518.2	13.7
70°-80°	345.5	9.1
80°-90°	95.6	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°	948.0	25.0
0°-40°	1559.1	41.2
0°-60°	2829.2	74.7
0°-90°	3788.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3788.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1211	1204	1210	1210	1210	115
15°	1153	1156	1176	1185	1188	325
25°	1050	1063	1095	1113	1123	483
35°	910	936	983	1016	1031	569
45°	748	788	851	898	920	578
55°	576	626	702	763	789	514
65°	392	449	535	602	628	387
75°	201	265	348	407	423	213
85°	44	81	89	88	89	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1211.0	1211.0	1211.0	1211.0	1211.0
2.5°	1216.0	1207.2	1211.0	1211.0	1206.0
5°	1211.0	1203.5	1209.7	1209.7	1209.7
7.5°	1202.2	1196.0	1206.0	1208.5	1208.5
10°	1188.5	1186.0	1198.5	1202.2	1203.5
12.5°	1173.5	1172.2	1189.7	1194.7	1198.5
15°	1153.4	1155.9	1176.0	1184.7	1188.5
17.5°	1132.2	1137.2	1159.7	1172.2	1176.0
20°	1107.2	1114.7	1140.9	1153.4	1160.9
22.5°	1079.6	1090.9	1118.4	1133.4	1142.2
25°	1049.6	1063.4	1094.6	1113.4	1123.4
27.5°	1017.1	1034.6	1070.9	1092.1	1102.2
30°	982.1	1002.1	1042.1	1067.1	1079.6
32.5°	945.8	969.5	1013.3	1040.9	1055.9
35°	909.5	935.8	983.3	1015.8	1030.8
37.5°	873.2	899.5	952.0	987.1	1005.8
40°	831.9	863.2	919.5	958.3	977.0
42.5°	791.9	825.7	885.7	928.3	948.3
45°	748.1	788.1	850.7	898.2	919.5
47.5°	708.1	748.1	815.7	865.7	889.5
50°	664.3	706.8	778.1	833.2	858.2
52.5°	621.8	665.5	740.6	799.4	824.4
55°	575.5	625.5	701.8	763.1	789.4
57.5°	529.2	583.0	661.8	725.6	751.9
60°	484.1	539.2	621.8	685.6	713.1
62.5°	439.1	494.2	580.5	645.5	671.8
65°	391.6	449.1	535.4	601.7	628.0
67.5°	344.0	404.1	490.4	556.7	581.7
70°	294.0	357.8	444.1	509.2	534.2
72.5°	247.7	311.5	396.6	460.4	484.1
75°	201.4	265.2	347.8	406.6	422.8
77.5°	156.4	220.2	294.0	332.8	336.5
80°	113.8	173.9	233.9	245.2	243.9
82.5°	76.3	130.1	161.4	162.6	166.4
85°	43.8	81.3	88.8	87.6	88.8
87.5°	17.5	28.8	25.0	18.8	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)