

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: P388686

Luminaire Tested: **24CZ2-45-SQR-UNV-L940-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: P388686
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-SDWPD1-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: 3696.4 lumens
Efficiency: N/A
Efficacy: 86.2 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

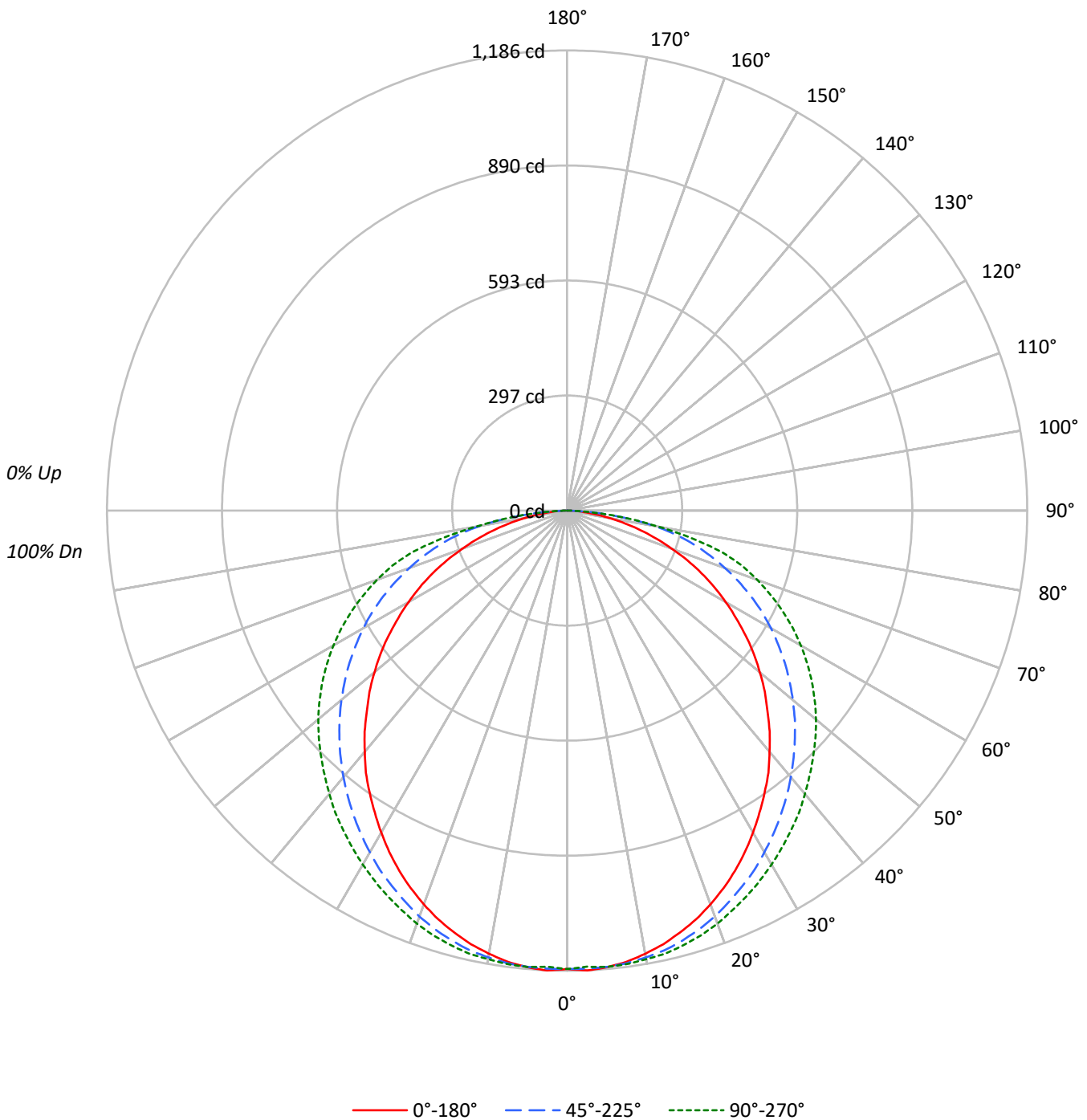
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	1590	1590	1590
5°	1596	1594	1594
10°	1584	1598	1604
15°	1568	1598	1615
20°	1547	1594	1622
25°	1520	1586	1627
30°	1489	1580	1637
35°	1458	1576	1652
40°	1426	1576	1674
45°	1389	1579	1707
50°	1357	1589	1753
55°	1317	1606	1807
60°	1271	1632	1872
65°	1216	1663	1951
70°	1128	1705	2050
75°	1022	1764	2145
80°	861	1769	1844
85°	659	1338	1338



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.2	3.0
10°-20°	322.7	8.7
20°-30°	490.1	13.3
30°-40°	596.2	16.1
40°-50°	634.7	17.2
50°-60°	604.6	16.4
60°-70°	505.6	13.7
70°-80°	337.1	9.1
80°-90°	93.3	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°	925.0	25.0
0°-40°	1521.2	41.2
0°-60°	2760.5	74.7
0°-90°	3696.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1182	1182	1182	1182	1182	
5°	1182	1174	1180	1180	1180	112
15°	1125	1128	1147	1156	1160	317
25°	1024	1038	1068	1086	1096	472
35°	887	913	959	991	1006	555
45°	730	769	830	876	897	564
55°	562	610	685	745	770	502
65°	382	438	522	587	613	377
75°	196	259	339	397	413	208
85°	43	79	87	85	87	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.5	1181.5	1181.5	1181.5	1181.5
2.5°	1186.4	1177.9	1181.5	1181.5	1176.7
5°	1181.5	1174.2	1180.3	1180.3	1180.3
7.5°	1173.0	1166.9	1176.7	1179.1	1179.1
10°	1159.6	1157.1	1169.3	1173.0	1174.2
12.5°	1144.9	1143.7	1160.8	1165.7	1169.3
15°	1125.4	1127.8	1147.4	1155.9	1159.6
17.5°	1104.7	1109.5	1131.5	1143.7	1147.4
20°	1080.2	1087.6	1113.2	1125.4	1132.7
22.5°	1053.4	1064.4	1091.2	1105.9	1114.4
25°	1024.1	1037.5	1068.0	1086.3	1096.1
27.5°	992.4	1009.4	1044.8	1065.6	1075.4
30°	958.2	977.7	1016.8	1041.2	1053.4
32.5°	922.8	946.0	988.7	1015.5	1030.2
35°	887.4	913.0	959.4	991.1	1005.8
37.5°	852.0	877.6	928.9	963.1	981.4
40°	811.7	842.2	897.1	935.0	953.3
42.5°	772.6	805.6	864.2	905.7	925.2
45°	729.9	769.0	830.0	876.4	897.1
47.5°	690.9	729.9	795.8	844.7	867.9
50°	648.1	689.6	759.2	812.9	837.3
52.5°	606.6	649.4	722.6	780.0	804.4
55°	561.5	610.3	684.8	744.6	770.2
57.5°	516.3	568.8	645.7	708.0	733.6
60°	472.4	526.1	606.6	668.9	695.7
62.5°	428.4	482.1	566.4	629.8	655.5
65°	382.1	438.2	522.4	587.1	612.7
67.5°	335.7	394.3	478.5	543.2	567.6
70°	286.8	349.1	433.3	496.8	521.2
72.5°	241.7	303.9	386.9	449.2	472.4
75°	196.5	258.8	339.3	396.7	412.6
77.5°	152.6	214.8	286.8	324.7	328.3
80°	111.1	169.7	228.3	239.2	238.0
82.5°	74.5	126.9	157.5	158.7	162.3
85°	42.7	79.3	86.7	85.4	86.7
87.5°	17.1	28.1	24.4	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)