

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: P388684

Luminaire Tested: **24CZ2-45-SQR-UNV-L935-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: P388684
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-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3703.2 lumens
Efficiency: N/A
Efficacy: 86.3 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

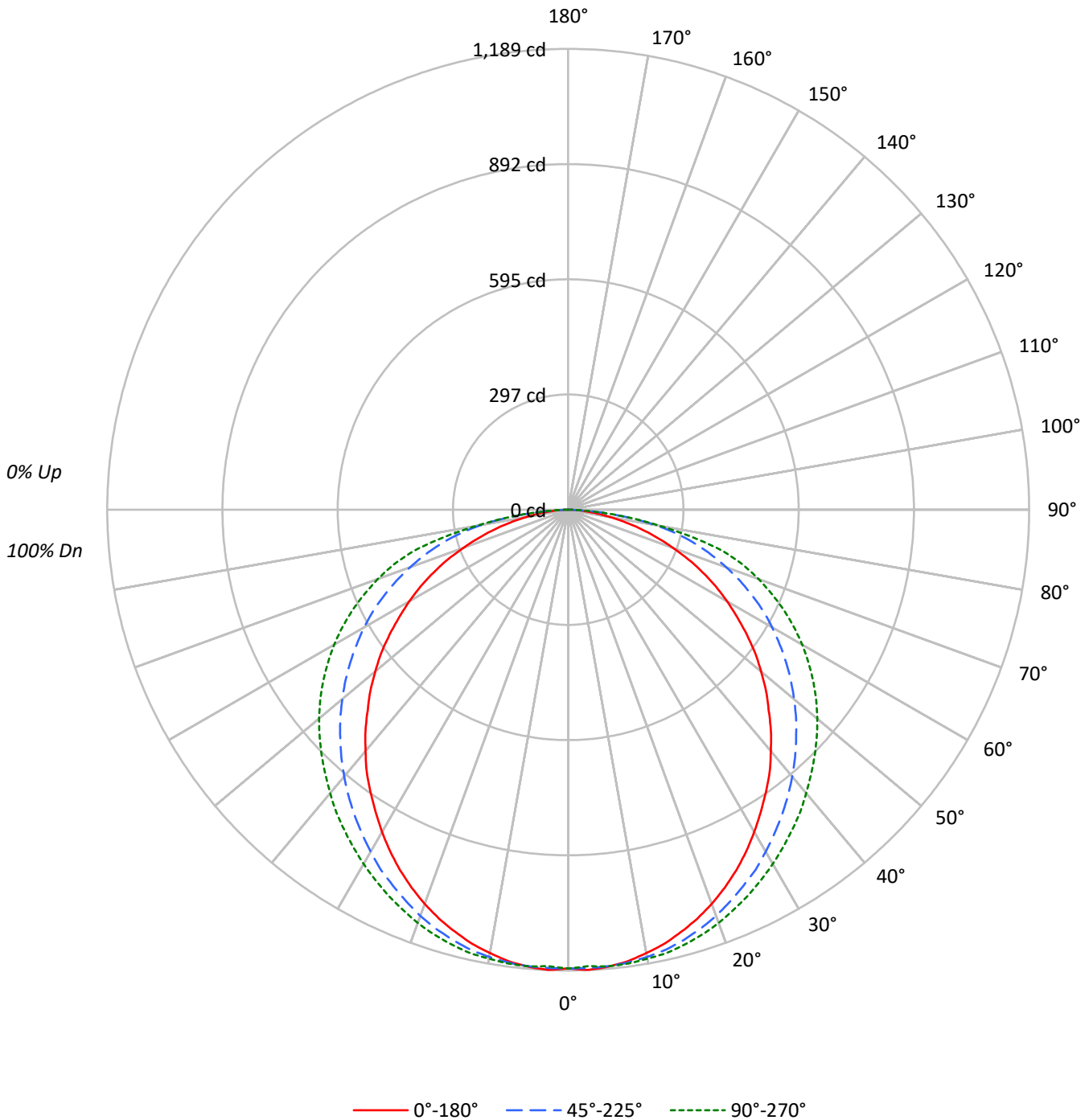
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1593	1593	1593
5°	1599	1597	1597
10°	1587	1601	1607
15°	1571	1601	1618
20°	1550	1597	1625
25°	1523	1589	1630
30°	1491	1583	1640
35°	1460	1579	1655
40°	1428	1579	1677
45°	1392	1582	1710
50°	1359	1592	1756
55°	1320	1609	1810
60°	1273	1636	1876
65°	1219	1666	1954
70°	1131	1708	2054
75°	1024	1768	2149
80°	862	1772	1848
85°	661	1340	1340



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	3.0
10°-20°	323.3	8.7
20°-30°	491.0	13.3
30°-40°	597.3	16.1
40°-50°	635.9	17.2
50°-60°	605.7	16.4
60°-70°	506.5	13.7
70°-80°	337.7	9.1
80°-90°	93.4	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°	926.7	25.0
0°-40°	1524.0	41.2
0°-60°	2765.5	74.7
0°-90°	3703.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3703.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1184	1176	1182	1182	1182	112
15°	1128	1130	1150	1158	1162	318
25°	1026	1039	1070	1088	1098	472
35°	889	915	961	993	1008	556
45°	731	770	832	878	899	565
55°	562	611	686	746	772	503
65°	383	439	523	588	614	378
75°	197	259	340	397	413	209
85°	43	80	87	86	87	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1188.6	1180.1	1183.7	1183.7	1178.8
5°	1183.7	1176.4	1182.5	1182.5	1182.5
7.5°	1175.2	1169.0	1178.8	1181.3	1181.3
10°	1161.7	1159.3	1171.5	1175.2	1176.4
12.5°	1147.0	1145.8	1162.9	1167.8	1171.5
15°	1127.5	1129.9	1149.5	1158.0	1161.7
17.5°	1106.7	1111.6	1133.6	1145.8	1149.5
20°	1082.2	1089.6	1115.2	1127.5	1134.8
22.5°	1055.3	1066.3	1093.2	1107.9	1116.5
25°	1026.0	1039.4	1070.0	1088.3	1098.1
27.5°	994.2	1011.3	1046.8	1067.6	1077.3
30°	959.9	979.5	1018.6	1043.1	1055.3
32.5°	924.5	947.7	990.5	1017.4	1032.1
35°	889.0	914.7	961.2	993.0	1007.6
37.5°	853.6	879.2	930.6	964.8	983.2
40°	813.2	843.8	898.8	936.7	955.0
42.5°	774.1	807.1	865.8	907.4	926.9
45°	731.3	770.4	831.5	878.0	898.8
47.5°	692.1	731.3	797.3	846.2	869.4
50°	649.3	690.9	760.6	814.4	838.9
52.5°	607.8	650.6	723.9	781.4	805.9
55°	562.5	611.4	686.0	745.9	771.6
57.5°	517.3	569.9	646.9	709.3	734.9
60°	473.2	527.1	607.8	670.1	697.0
62.5°	429.2	483.0	567.4	631.0	656.7
65°	382.8	439.0	523.4	588.2	613.9
67.5°	336.3	395.0	479.4	544.2	568.6
70°	287.4	349.7	434.1	497.7	522.2
72.5°	242.1	304.5	387.6	450.0	473.2
75°	196.9	259.2	340.0	397.4	413.3
77.5°	152.9	215.2	287.4	325.3	328.9
80°	111.3	170.0	228.7	239.7	238.5
82.5°	74.6	127.2	157.7	159.0	162.6
85°	42.8	79.5	86.8	85.6	86.8
87.5°	17.1	28.1	24.5	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)