

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: P388731

Luminaire Tested: **24CZ2-45VHE-SQR-UNV-L935-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: P388731
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: 24CZ2-45VHE-SQR-UNV-L935-CD1-SDWPD1-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: 3611.8 lumens
Efficiency: N/A
Efficacy: 122.0 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

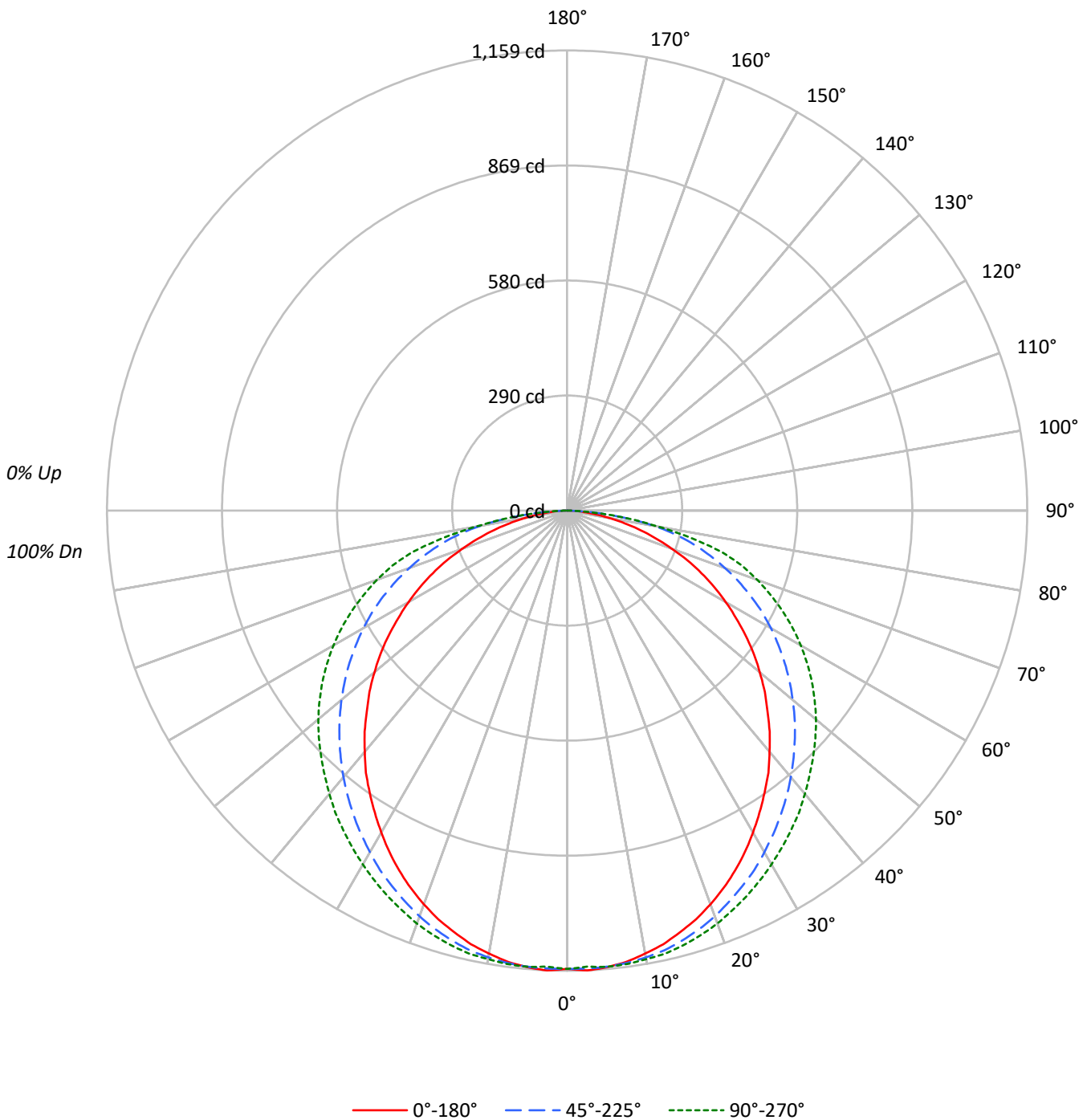
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1553	1553	1553
5°	1559	1558	1558
10°	1548	1561	1568
15°	1532	1562	1578
20°	1511	1557	1585
25°	1486	1549	1590
30°	1455	1544	1599
35°	1424	1540	1614
40°	1393	1540	1636
45°	1357	1543	1668
50°	1326	1553	1713
55°	1287	1570	1765
60°	1242	1595	1829
65°	1188	1625	1906
70°	1103	1666	2004
75°	998	1724	2096
80°	841	1728	1802
85°	644	1308	1308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.0
10°-20°	315.3	8.7
20°-30°	478.9	13.3
30°-40°	582.5	16.1
40°-50°	620.2	17.2
50°-60°	590.7	16.4
60°-70°	494.0	13.7
70°-80°	329.4	9.1
80°-90°	91.1	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°	903.8	25.0
0°-40°	1486.3	41.2
0°-60°	2697.3	74.7
0°-90°	3611.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3611.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1154	1154	1154	1154	1154	
5°	1154	1147	1153	1153	1153	110
15°	1100	1102	1121	1130	1133	310
25°	1001	1014	1044	1062	1071	461
35°	867	892	937	968	983	543
45°	713	751	811	856	877	551
55°	549	596	669	728	753	490
65°	373	428	510	574	599	369
75°	192	253	332	388	403	203
85°	42	78	85	84	85	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1154.5	1154.5	1154.5	1154.5	1154.5
2.5°	1159.3	1150.9	1154.5	1154.5	1149.7
5°	1154.5	1147.4	1153.3	1153.3	1153.3
7.5°	1146.2	1140.2	1149.7	1152.1	1152.1
10°	1133.0	1130.7	1142.6	1146.2	1147.4
12.5°	1118.7	1117.5	1134.2	1139.0	1142.6
15°	1099.6	1102.0	1121.1	1129.5	1133.0
17.5°	1079.4	1084.1	1105.6	1117.5	1121.1
20°	1055.5	1062.7	1087.7	1099.6	1106.8
22.5°	1029.3	1040.0	1066.2	1080.6	1088.9
25°	1000.7	1013.8	1043.6	1061.5	1071.0
27.5°	969.6	986.3	1020.9	1041.2	1050.7
30°	936.2	955.3	993.5	1017.3	1029.3
32.5°	901.7	924.3	966.1	992.3	1006.6
35°	867.1	892.1	937.4	968.5	982.8
37.5°	832.5	857.5	907.6	941.0	958.9
40°	793.1	822.9	876.6	913.6	931.5
42.5°	755.0	787.2	844.4	885.0	904.0
45°	713.2	751.4	811.0	856.3	876.6
47.5°	675.1	713.2	777.6	825.3	848.0
50°	633.3	673.9	741.8	794.3	818.2
52.5°	592.8	634.5	706.1	762.1	786.0
55°	548.6	596.3	669.1	727.5	752.6
57.5°	504.5	555.8	630.9	691.8	716.8
60°	461.6	514.0	592.8	653.6	679.8
62.5°	418.6	471.1	553.4	615.4	640.5
65°	373.3	428.2	510.5	573.7	598.7
67.5°	328.0	385.2	467.5	530.7	554.6
70°	280.3	341.1	423.4	485.4	509.3
72.5°	236.1	297.0	378.1	438.9	461.6
75°	192.0	252.8	331.6	387.6	403.1
77.5°	149.1	209.9	280.3	317.3	320.8
80°	108.5	165.8	223.0	233.8	232.6
82.5°	72.8	124.0	153.9	155.0	158.6
85°	41.7	77.5	84.7	83.5	84.7
87.5°	16.7	27.4	23.9	17.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)