

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: P388683

Luminaire Tested: **24CZ2-45-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: P388683
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-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: 3658.6 lumens
Efficiency: N/A
Efficacy: 85.3 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

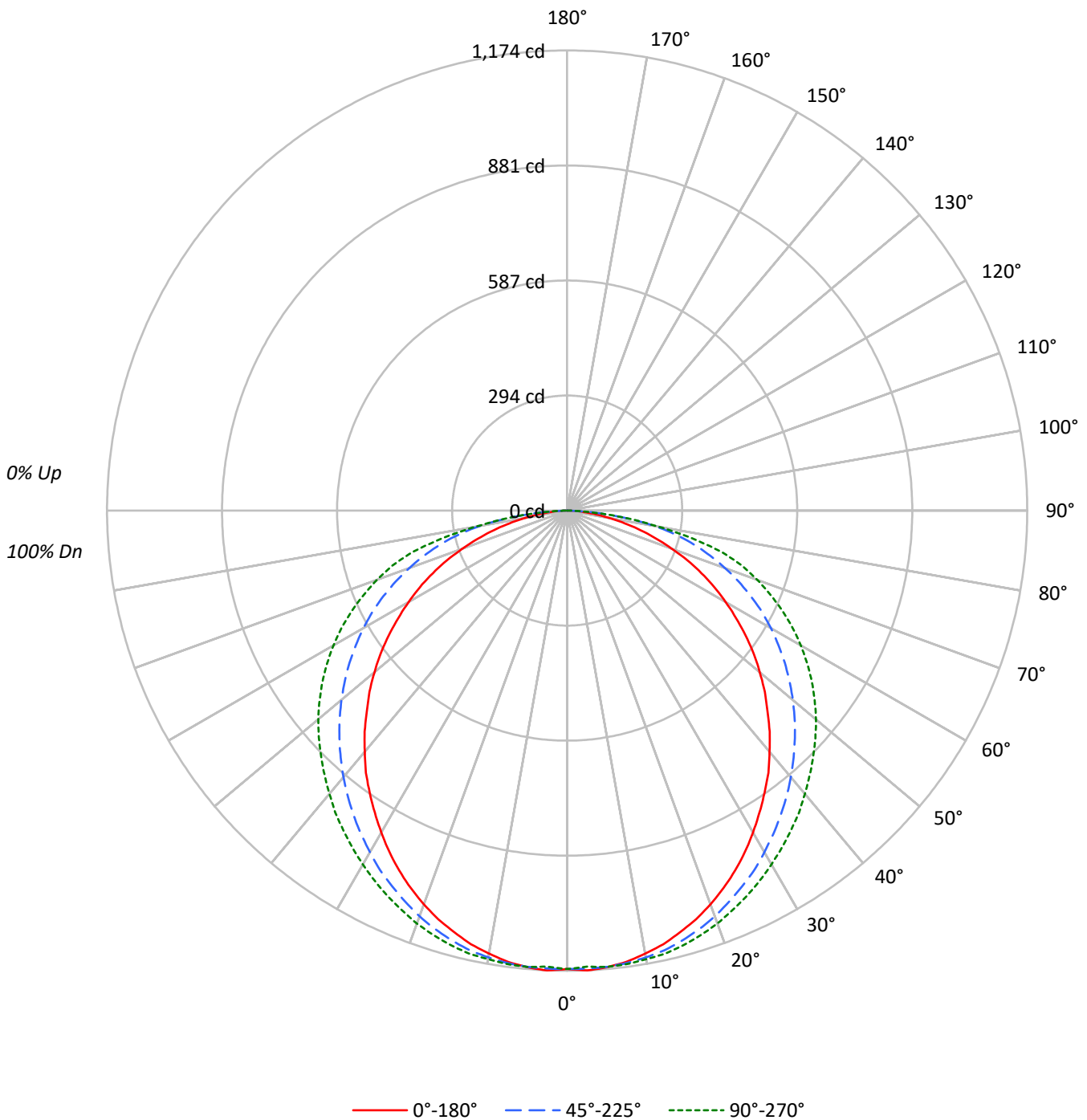
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1574	1574	1574
5°	1580	1578	1578
10°	1568	1581	1588
15°	1552	1582	1599
20°	1531	1578	1605
25°	1505	1569	1611
30°	1473	1564	1620
35°	1443	1560	1635
40°	1411	1560	1657
45°	1375	1563	1690
50°	1343	1573	1735
55°	1304	1590	1788
60°	1258	1616	1853
65°	1204	1646	1931
70°	1117	1687	2030
75°	1011	1746	2123
80°	852	1750	1826
85°	653	1325	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.0	3.0
10°-20°	319.4	8.7
20°-30°	485.1	13.3
30°-40°	590.1	16.1
40°-50°	628.3	17.2
50°-60°	598.4	16.4
60°-70°	500.4	13.7
70°-80°	333.6	9.1
80°-90°	92.3	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°	915.5	25.0
0°-40°	1505.6	41.2
0°-60°	2732.2	74.7
0°-90°	3658.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3658.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1170	1162	1168	1168	1168	111
15°	1114	1116	1136	1144	1148	314
25°	1014	1027	1057	1075	1085	467
35°	878	904	950	981	996	550
45°	722	761	822	867	888	558
55°	556	604	678	737	762	497
65°	378	434	517	581	606	374
75°	194	256	336	393	408	206
85°	42	78	86	85	86	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1169.5	1169.5	1169.5	1169.5	1169.5
2.5°	1174.3	1165.8	1169.5	1169.5	1164.6
5°	1169.5	1162.2	1168.3	1168.3	1168.3
7.5°	1161.0	1155.0	1164.6	1167.1	1167.1
10°	1147.7	1145.3	1157.4	1161.0	1162.2
12.5°	1133.2	1132.0	1148.9	1153.8	1157.4
15°	1113.9	1116.3	1135.6	1144.1	1147.7
17.5°	1093.4	1098.2	1119.9	1132.0	1135.6
20°	1069.2	1076.4	1101.8	1113.9	1121.1
22.5°	1042.6	1053.5	1080.1	1094.6	1103.0
25°	1013.6	1026.9	1057.1	1075.2	1084.9
27.5°	982.2	999.1	1034.2	1054.7	1064.4
30°	948.4	967.7	1006.4	1030.5	1042.6
32.5°	913.3	936.3	978.6	1005.2	1019.7
35°	878.3	903.7	949.6	981.0	995.5
37.5°	843.3	868.6	919.4	953.2	971.3
40°	803.4	833.6	888.0	925.4	943.5
42.5°	764.7	797.4	855.4	896.4	915.8
45°	722.5	761.1	821.5	867.4	888.0
47.5°	683.8	722.5	787.7	836.0	859.0
50°	641.5	682.6	751.5	804.6	828.8
52.5°	600.4	642.7	715.2	772.0	796.2
55°	555.7	604.1	677.8	737.0	762.3
57.5°	511.0	563.0	639.1	700.7	726.1
60°	467.5	520.7	600.4	662.1	688.6
62.5°	424.1	477.2	560.6	623.4	648.8
65°	378.1	433.7	517.1	581.1	606.5
67.5°	332.2	390.2	473.6	537.6	561.8
70°	283.9	345.5	428.9	491.7	515.9
72.5°	239.2	300.8	383.0	444.6	467.5
75°	194.5	256.1	335.9	392.6	408.3
77.5°	151.0	212.6	283.9	321.4	325.0
80°	109.9	167.9	225.9	236.8	235.6
82.5°	73.7	125.6	155.8	157.1	160.7
85°	42.3	78.5	85.8	84.6	85.8
87.5°	16.9	27.8	24.2	18.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)