

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: P389714

Luminaire Tested: **24CZ2-35VHE-S-UNV-L935-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: P389714
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-S-UNV-L935-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3132.4 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

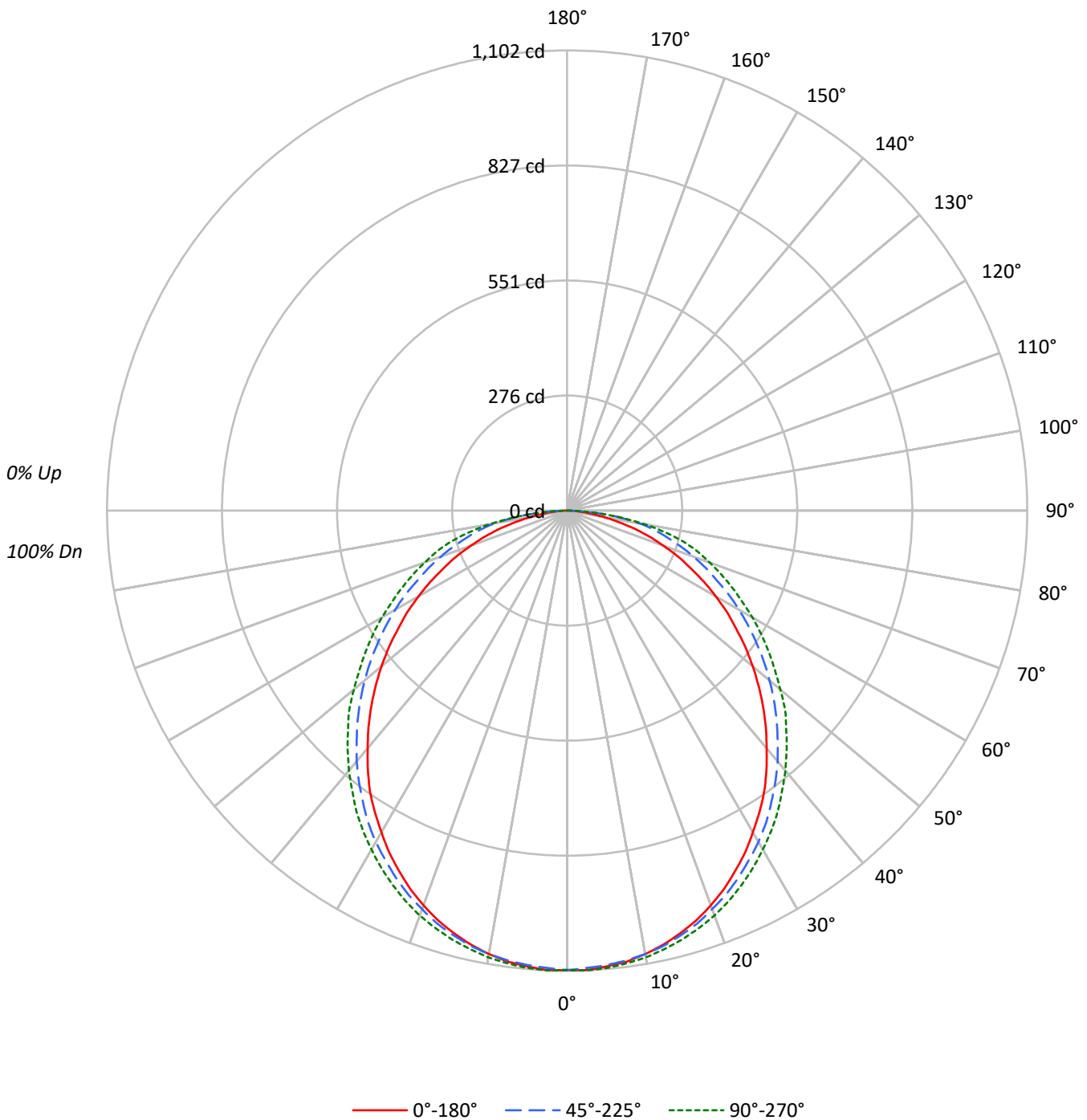
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389714

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389714

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L935-CD1-U

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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1481	1481	1481
5°	1480	1476	1485
10°	1473	1473	1484
15°	1459	1466	1482
20°	1440	1455	1477
25°	1414	1440	1468
30°	1382	1424	1456
35°	1351	1401	1445
40°	1305	1377	1428
45°	1263	1350	1412
50°	1214	1325	1395
55°	1160	1300	1382
60°	1106	1280	1379
65°	1036	1258	1387
70°	959	1264	1425
75°	859	1288	1505
80°	693	1364	1472
85°	522	1198	1167



TEST NUMBER: P389714

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.2	3.3
10°-20°	297.7	9.5
20°-30°	447.5	14.3
30°-40°	533.0	17.0
40°-50°	545.5	17.4
50°-60°	491.1	15.7
60°-70°	385.7	12.3
70°-80°	250.3	8.0
80°-90°	77.4	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°	849.3	27.1
0°-40°	1382.3	44.1
0°-60°	2419.0	77.2
0°-90°	3132.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3132.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1096	1097	1092	1098	1099	104
15°	1048	1051	1053	1062	1064	295
25°	952	960	970	986	989	439
35°	823	833	853	874	880	513
45°	664	680	709	736	742	512
55°	494	516	554	583	589	443
65°	325	350	395	428	436	324
75°	165	197	248	282	290	175
85°	34	63	78	76	76	41
90°	0	0	0	0	0	



TEST NUMBER: P389714

CATALOG NUMBER: 24CZ2-35VHE-S-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1100.4	1100.4	1100.4	1100.4	1100.4
2.5°	1101.4	1101.4	1096.5	1101.4	1102.4
5°	1095.5	1097.4	1092.5	1098.4	1099.4
7.5°	1089.5	1089.5	1086.5	1092.5	1093.5
10°	1078.5	1079.5	1078.5	1085.5	1086.5
12.5°	1064.6	1066.6	1067.6	1074.6	1075.6
15°	1047.7	1050.7	1052.7	1061.6	1063.6
17.5°	1028.8	1031.8	1036.8	1046.7	1048.7
20°	1005.9	1009.9	1015.9	1028.8	1031.8
22.5°	981.0	985.0	995.0	1006.9	1011.9
25°	952.2	960.1	970.1	986.0	989.0
27.5°	923.3	930.3	943.2	960.1	964.1
30°	889.5	900.4	916.4	933.3	937.3
32.5°	856.7	867.6	886.5	904.4	909.4
35°	822.8	832.8	852.7	873.6	879.6
37.5°	784.0	797.0	818.9	839.8	845.7
40°	743.2	759.2	784.0	805.9	812.9
42.5°	704.4	721.4	746.2	770.1	778.1
45°	663.6	679.6	709.4	736.3	742.2
47.5°	621.9	639.8	671.6	698.5	708.4
50°	580.1	599.0	632.8	660.7	666.6
52.5°	538.3	558.2	594.0	623.8	626.8
55°	494.5	516.4	554.2	583.1	589.0
57.5°	454.7	473.6	514.4	544.2	551.2
60°	410.9	431.8	475.6	503.5	512.4
62.5°	369.1	391.0	436.8	464.6	472.6
65°	325.4	350.2	395.0	427.8	435.8
67.5°	287.5	311.4	359.2	391.0	399.0
70°	243.8	270.6	321.4	354.2	362.2
72.5°	206.0	233.8	284.6	316.4	328.3
75°	165.2	197.0	247.7	281.6	289.5
77.5°	125.4	162.2	213.9	239.8	239.8
80°	89.5	128.4	176.1	188.0	190.0
82.5°	58.7	96.5	130.3	129.3	129.3
85°	33.8	62.7	77.6	75.6	75.6
87.5°	12.9	25.9	27.9	27.9	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)