

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: P388774

Luminaire Tested: **24CZ2-35VHE-UNV-L930-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: P388774
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2873.1 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

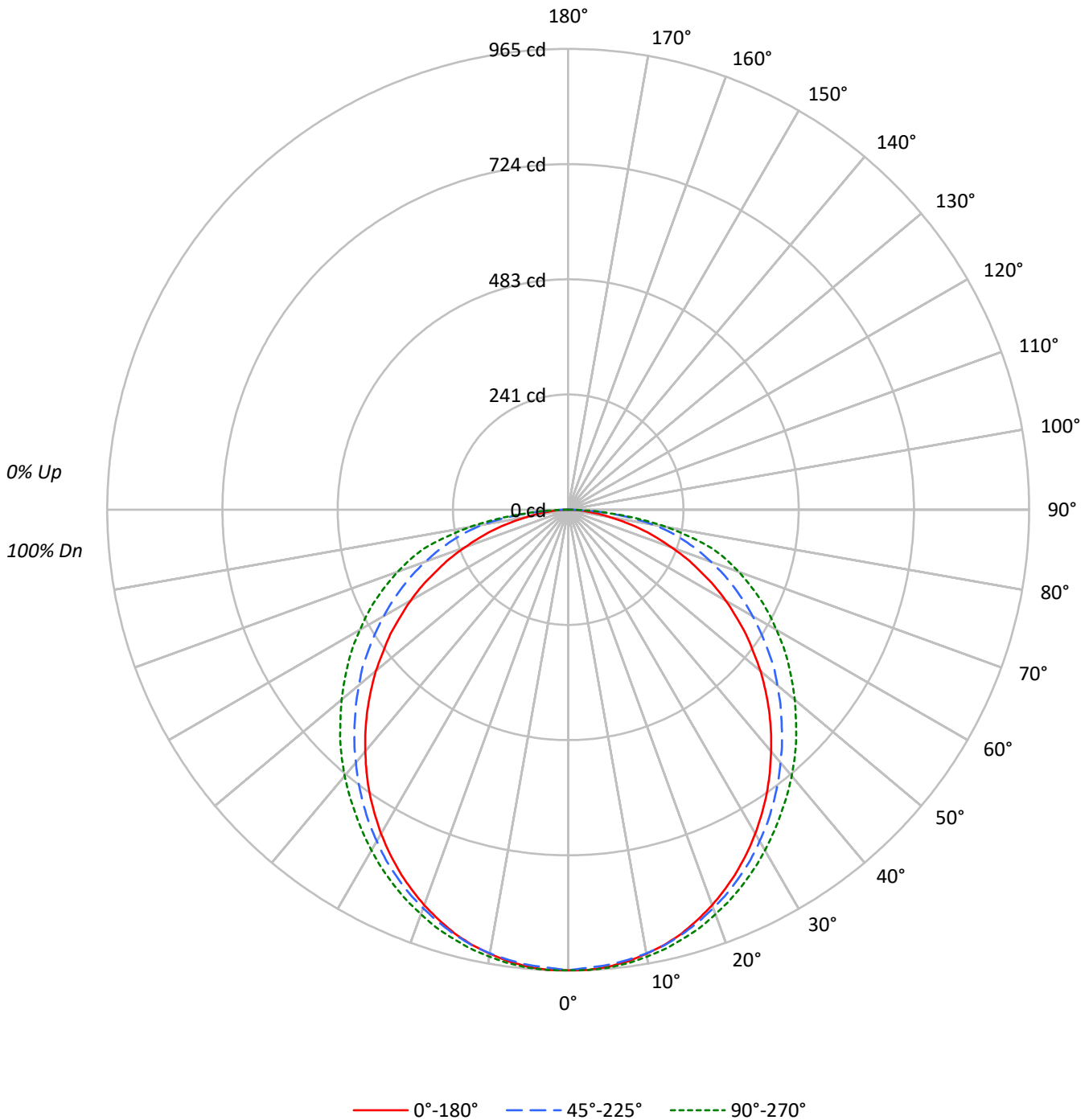
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388774

CATALOG NUMBER: 24CZ2-35VHE-UNV-L930-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388774

CATALOG NUMBER: 24CZ2-35VHE-UNV-L930-CD1-SWPD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1298	1298	1298
5°	1298	1293	1300
10°	1290	1289	1298
15°	1280	1282	1296
20°	1262	1271	1291
25°	1241	1260	1286
30°	1217	1245	1280
35°	1191	1230	1276
40°	1160	1214	1278
45°	1131	1202	1285
50°	1100	1196	1297
55°	1066	1194	1320
60°	1024	1200	1355
65°	971	1218	1414
70°	902	1249	1494
75°	822	1311	1620
80°	676	1412	1619
85°	519	1303	1391



TEST NUMBER: P388774

CATALOG NUMBER: 24CZ2-35VHE-UNV-L930-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	3.2
10°-20°	260.5	9.1
20°-30°	391.9	13.6
30°-40°	469.7	16.3
40°-50°	489.5	17.0
50°-60°	455.4	15.9
60°-70°	375.1	13.1
70°-80°	255.5	8.9
80°-90°	84.3	2.9
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°	743.6	25.9
0°-40°	1213.3	42.2
0°-60°	2158.2	75.1
0°-90°	2873.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2873.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	961	961	957	962	963	91
15°	919	920	920	929	930	259
25°	836	840	849	863	866	385
35°	725	734	749	769	777	453
45°	594	607	632	664	675	459
55°	454	470	509	549	563	405
65°	305	331	383	428	444	303
75°	158	194	252	297	312	167
85°	34	65	84	90	90	42
90°	0	0	0	0	0	



TEST NUMBER: P388774

CATALOG NUMBER: 24CZ2-35VHE-UNV-L930-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	964.6	964.6	964.6	964.6	964.6
2.5°	964.6	964.6	959.8	964.6	964.6
5°	960.8	960.8	957.0	961.8	962.7
7.5°	954.1	955.0	951.2	957.0	957.9
10°	944.5	945.5	943.5	949.3	950.3
12.5°	933.0	933.9	933.9	940.7	941.6
15°	918.6	919.6	920.5	929.2	930.1
17.5°	900.4	903.3	905.2	915.7	917.6
20°	881.2	884.1	887.9	899.4	901.3
22.5°	859.2	863.0	869.7	882.2	885.0
25°	836.1	840.0	848.6	863.0	865.9
27.5°	810.3	816.0	826.6	841.9	845.7
30°	783.4	789.2	801.6	817.9	823.7
32.5°	754.6	762.3	776.7	794.9	800.7
35°	724.9	733.5	748.9	769.0	776.7
37.5°	693.3	702.9	721.1	743.1	752.7
40°	660.7	672.2	691.4	717.2	727.8
42.5°	628.1	638.6	662.6	690.4	701.9
45°	594.5	607.0	631.9	663.5	675.1
47.5°	560.0	572.5	602.2	635.7	646.3
50°	525.5	537.9	571.5	607.0	619.4
52.5°	488.1	504.4	542.7	578.2	590.7
55°	454.5	469.9	509.2	549.4	562.9
57.5°	416.2	434.4	477.5	519.7	534.1
60°	380.7	399.9	445.9	489.0	503.4
62.5°	344.2	365.3	414.2	458.3	474.6
65°	304.9	330.8	382.6	427.7	444.0
67.5°	269.4	296.3	351.0	397.0	411.4
70°	229.2	261.8	317.4	363.4	379.7
72.5°	194.7	227.3	285.7	330.8	347.1
75°	158.2	193.7	252.2	297.3	311.6
77.5°	121.8	161.1	219.6	254.1	258.9
80°	87.3	128.5	182.2	202.3	209.0
82.5°	61.4	98.8	134.2	147.7	151.5
85°	33.6	65.2	84.4	90.1	90.1
87.5°	14.4	27.8	33.6	34.5	35.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)