

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: P388657

Luminaire Tested: **24CZ2-40VHE-SQR-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: P388657
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: 24CZ2-40VHE-SQR-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3163.1 lumens
Efficiency: N/A
Efficacy: 120.7 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

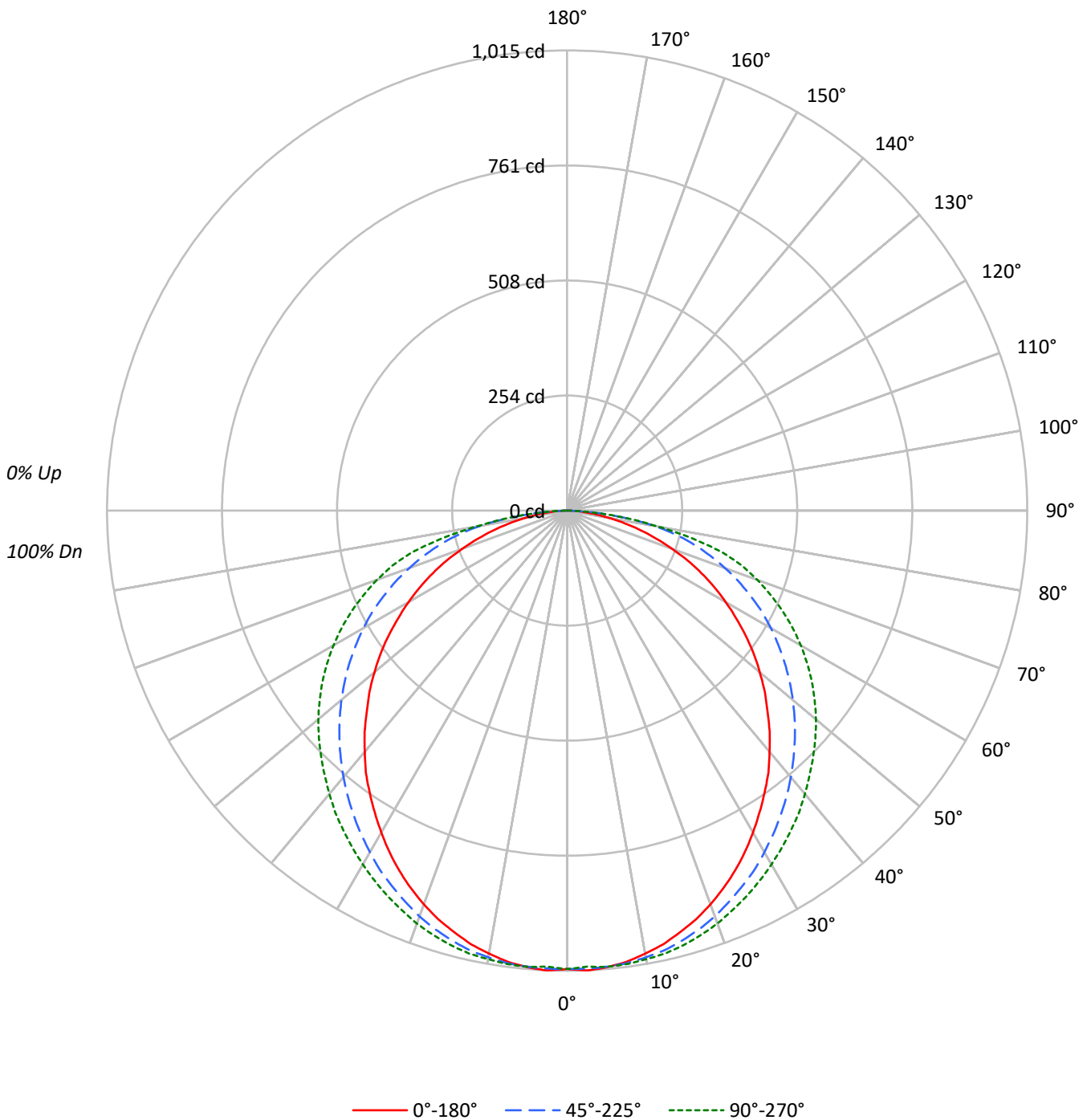
Input Watts (W): 26.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1360	1360	1360
5°	1366	1364	1364
10°	1356	1367	1373
15°	1341	1368	1382
20°	1324	1364	1388
25°	1301	1357	1393
30°	1274	1352	1400
35°	1247	1349	1414
40°	1220	1348	1433
45°	1188	1352	1461
50°	1161	1360	1500
55°	1127	1375	1546
60°	1088	1397	1602
65°	1041	1423	1669
70°	966	1459	1755
75°	874	1510	1835
80°	736	1513	1578
85°	565	1145	1145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	3.0
10°-20°	276.1	8.7
20°-30°	419.4	13.3
30°-40°	510.2	16.1
40°-50°	543.2	17.2
50°-60°	517.3	16.4
60°-70°	432.6	13.7
70°-80°	288.4	9.1
80°-90°	79.8	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°	791.5	25.0
0°-40°	1301.7	41.2
0°-60°	2362.2	74.7
0°-90°	3163.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3163.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1011	1005	1010	1010	1010	96
15°	963	965	982	989	992	272
25°	876	888	914	930	938	403
35°	759	781	821	848	861	475
45°	625	658	710	750	768	483
55°	480	522	586	637	659	430
65°	327	375	447	502	524	323
75°	168	221	290	340	353	178
85°	37	68	74	73	74	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.1	1011.1	1011.1	1011.1	1011.1
2.5°	1015.3	1007.9	1011.1	1011.1	1006.9
5°	1011.1	1004.8	1010.0	1010.0	1010.0
7.5°	1003.8	998.5	1006.9	1009.0	1009.0
10°	992.3	990.2	1000.6	1003.8	1004.8
12.5°	979.7	978.7	993.3	997.5	1000.6
15°	963.0	965.1	981.8	989.1	992.3
17.5°	945.3	949.5	968.3	978.7	981.8
20°	924.4	930.7	952.6	963.0	969.3
22.5°	901.4	910.8	933.8	946.3	953.6
25°	876.3	887.8	913.9	929.6	938.0
27.5°	849.2	863.8	894.1	911.9	920.2
30°	819.9	836.6	870.1	891.0	901.4
32.5°	789.6	809.5	846.0	869.0	881.6
35°	759.4	781.3	821.0	848.1	860.7
37.5°	729.1	751.0	794.9	824.1	839.8
40°	694.6	720.7	767.7	800.1	815.8
42.5°	661.2	689.4	739.5	775.0	791.7
45°	624.6	658.0	710.3	750.0	767.7
47.5°	591.2	624.6	681.0	722.8	742.6
50°	554.6	590.1	649.7	695.6	716.5
52.5°	519.1	555.7	618.3	667.4	688.3
55°	480.5	522.3	586.0	637.1	659.1
57.5°	441.8	486.7	552.5	605.8	627.7
60°	404.2	450.2	519.1	572.4	595.4
62.5°	366.6	412.6	484.7	539.0	560.9
65°	326.9	375.0	447.0	502.4	524.3
67.5°	287.2	337.4	409.4	464.8	485.7
70°	245.5	298.7	370.8	425.1	446.0
72.5°	206.8	260.1	331.1	384.4	404.2
75°	168.2	221.4	290.4	339.5	353.0
77.5°	130.6	183.8	245.5	277.8	281.0
80°	95.0	145.2	195.3	204.7	203.7
82.5°	63.7	108.6	134.7	135.8	138.9
85°	36.6	67.9	74.2	73.1	74.2
87.5°	14.6	24.0	20.9	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)