

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: P391419

Luminaire Tested: **24CZ2-50VHE-HRP-UNV-L940-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: P391419
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50VHE-HRP-UNV-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3582.6 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

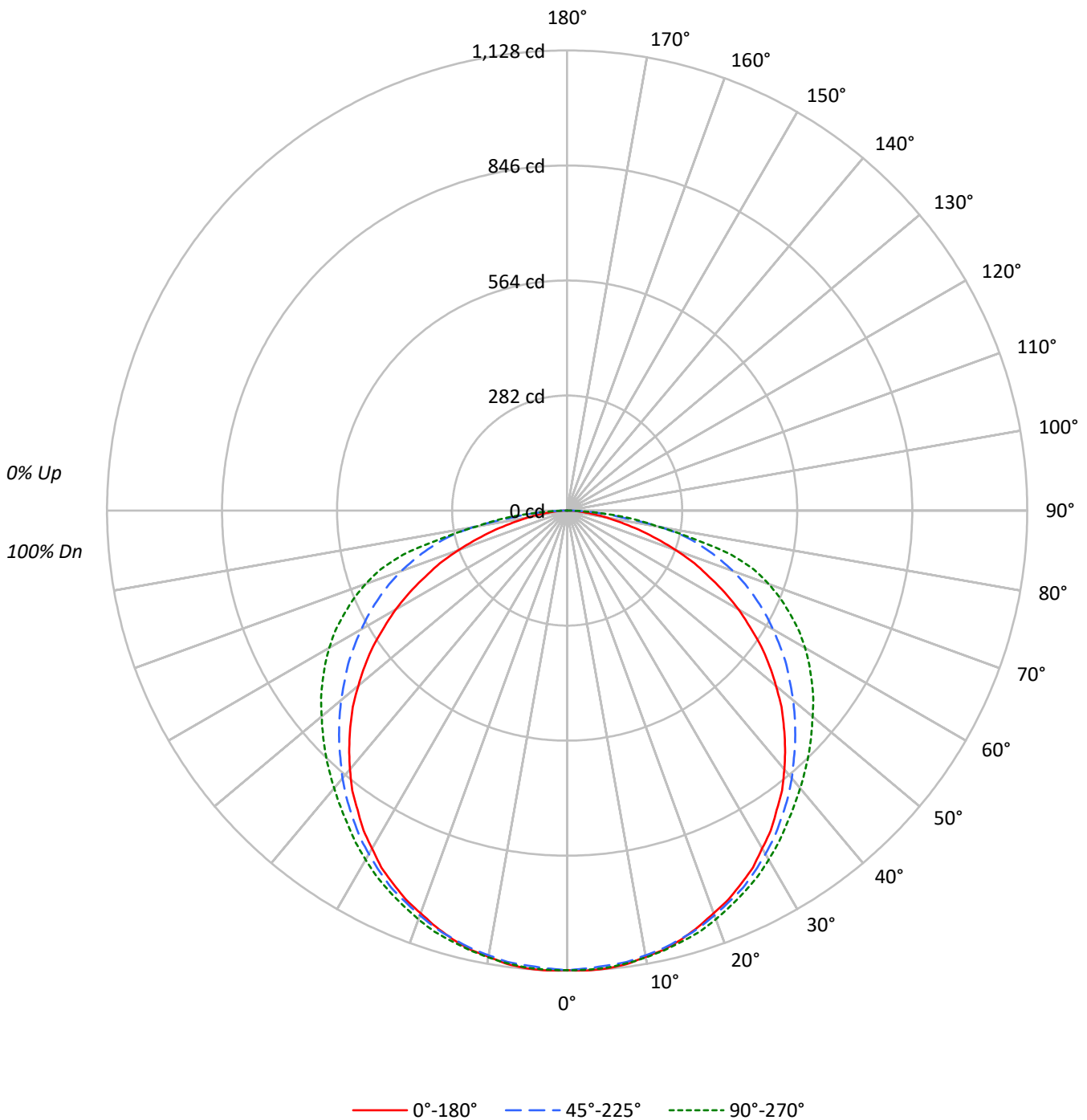
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1516	1516	1516
5°	1522	1512	1519
10°	1517	1513	1520
15°	1515	1512	1522
20°	1504	1511	1527
25°	1498	1514	1530
30°	1485	1510	1535
35°	1471	1506	1541
40°	1454	1504	1561
45°	1430	1505	1596
50°	1399	1514	1644
55°	1363	1538	1717
60°	1305	1569	1812
65°	1222	1624	1924
70°	1111	1699	2069
75°	943	1792	2162
80°	744	1804	1749
85°	548	1372	1536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	3.0
10°-20°	307.6	8.6
20°-30°	470.3	13.1
30°-40°	575.0	16.0
40°-50°	612.8	17.1
50°-60°	585.9	16.4
60°-70°	496.4	13.9
70°-80°	333.6	9.3
80°-90°	94.1	2.6
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°	884.8	24.7
0°-40°	1459.8	40.7
0°-60°	2658.5	74.2
0°-90°	3582.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3582.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1127	1127	1127	1127	1127	
5°	1127	1125	1120	1125	1125	107
15°	1088	1088	1086	1095	1093	307
25°	1009	1013	1020	1029	1031	465
35°	896	903	917	935	938	561
45°	752	764	791	824	839	580
55°	581	602	656	707	732	518
65°	384	423	510	578	604	381
75°	181	247	345	403	416	194
85°	36	73	89	96	100	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1126.6	1126.6	1126.6	1126.6	1126.6
2.5°	1128.4	1128.4	1123.1	1126.6	1126.6
5°	1126.6	1124.8	1119.5	1124.8	1124.8
7.5°	1121.3	1119.5	1116.0	1121.3	1119.5
10°	1110.6	1110.6	1107.1	1112.4	1112.4
12.5°	1101.7	1100.0	1098.2	1105.3	1103.5
15°	1087.5	1087.5	1085.8	1094.6	1092.9
17.5°	1069.8	1071.5	1073.3	1080.4	1082.2
20°	1050.2	1053.8	1055.5	1066.2	1066.2
22.5°	1032.4	1034.2	1037.8	1048.4	1048.4
25°	1009.3	1012.9	1020.0	1028.9	1030.7
27.5°	986.2	988.0	996.9	1009.3	1011.1
30°	956.0	961.4	972.0	986.2	988.0
32.5°	929.4	934.7	947.1	961.4	964.9
35°	895.6	902.7	916.9	934.7	938.3
37.5°	865.4	870.7	888.5	908.1	913.4
40°	828.1	838.7	856.5	879.6	888.5
42.5°	790.8	801.4	822.8	853.0	863.6
45°	751.7	764.1	790.8	824.5	838.7
47.5°	712.6	726.8	757.0	796.1	812.1
50°	668.2	685.9	723.2	767.7	785.4
52.5°	625.5	646.8	687.7	737.5	760.6
55°	581.1	602.4	655.7	707.3	732.1
57.5°	531.3	559.8	618.4	677.0	703.7
60°	485.1	511.8	582.9	646.8	673.5
62.5°	435.4	470.9	547.3	614.8	641.5
65°	383.8	422.9	510.0	577.5	604.2
67.5°	337.6	380.3	472.7	540.2	566.9
70°	282.5	335.9	431.8	499.3	526.0
72.5°	231.0	289.7	389.2	454.9	479.8
75°	181.3	247.0	344.7	403.4	415.8
77.5°	135.1	204.4	298.5	323.4	314.5
80°	96.0	163.5	232.8	220.3	225.7
82.5°	62.2	124.4	143.9	163.5	168.8
85°	35.5	72.9	88.9	96.0	99.5
87.5°	16.0	26.7	35.5	35.5	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)