

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: P391413

Luminaire Tested: **24CZ2-50VHE-HRP-UNV-L930-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: P391413
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-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3460.3 lumens
Efficiency: N/A
Efficacy: 105.8 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

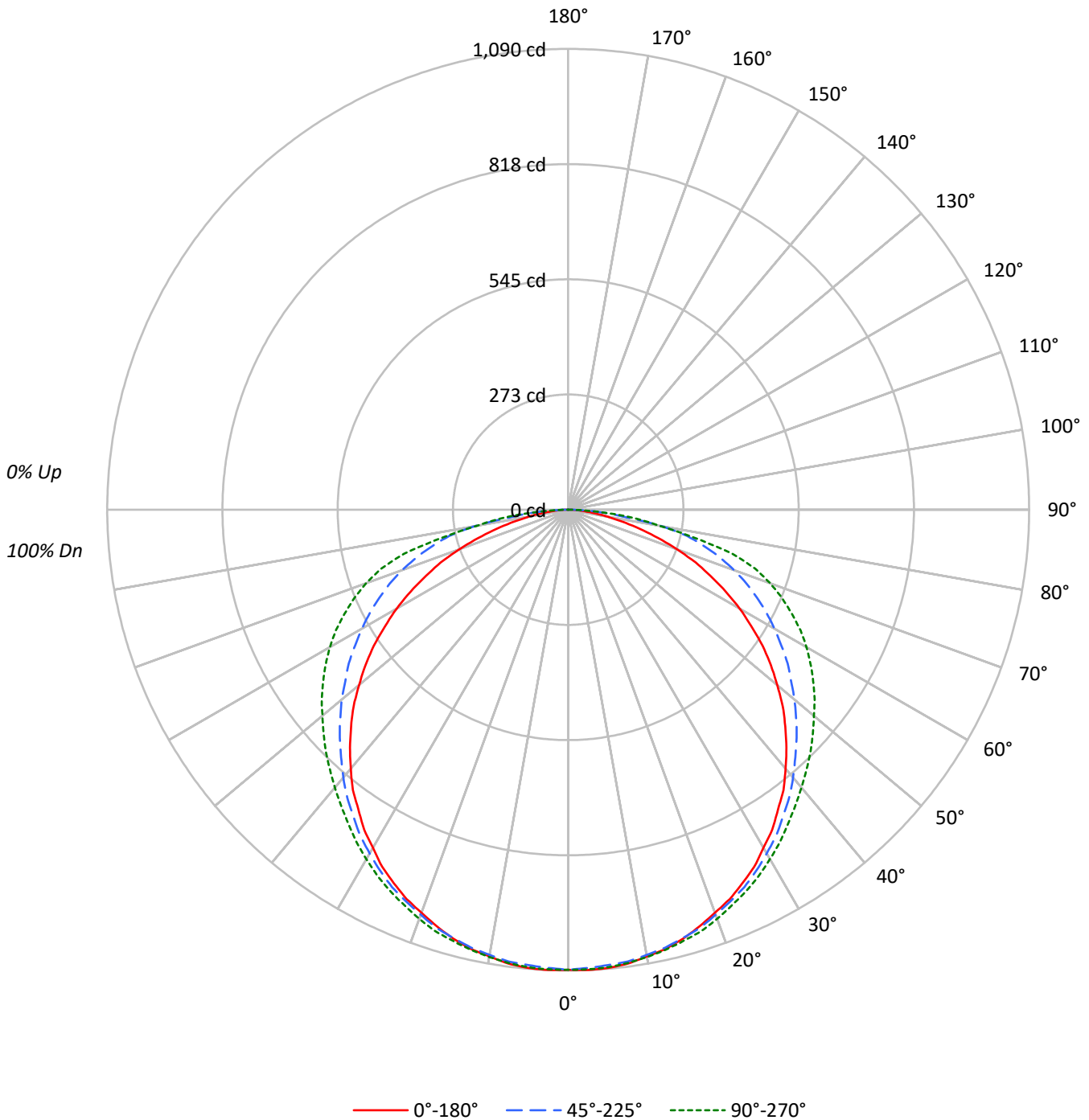
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1464	1464	1464
5°	1470	1460	1467
10°	1466	1461	1468
15°	1463	1461	1470
20°	1452	1460	1475
25°	1447	1463	1478
30°	1435	1459	1483
35°	1421	1455	1488
40°	1405	1453	1507
45°	1381	1453	1541
50°	1351	1462	1588
55°	1316	1486	1659
60°	1261	1515	1750
65°	1180	1568	1858
70°	1074	1641	1998
75°	910	1731	2088
80°	718	1742	1689
85°	530	1325	1484



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.2	3.0
10°-20°	297.1	8.6
20°-30°	454.3	13.1
30°-40°	555.4	16.0
40°-50°	591.9	17.1
50°-60°	565.9	16.4
60°-70°	479.4	13.9
70°-80°	322.2	9.3
80°-90°	90.9	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°	854.6	24.7
0°-40°	1409.9	40.7
0°-60°	2567.8	74.2
0°-90°	3460.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3460.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1088	1088	1088	1088	1088	
5°	1088	1086	1081	1086	1086	103
15°	1050	1050	1049	1057	1056	296
25°	975	978	985	994	996	449
35°	865	872	886	903	906	542
45°	726	738	764	796	810	560
55°	561	582	633	683	707	500
65°	371	408	493	558	584	368
75°	175	239	333	390	402	187
85°	34	70	86	93	96	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1088.2	1088.2	1088.2	1088.2	1088.2
2.5°	1089.9	1089.9	1084.7	1088.2	1088.2
5°	1088.2	1086.4	1081.3	1086.4	1086.4
7.5°	1083.0	1081.3	1077.9	1083.0	1081.3
10°	1072.7	1072.7	1069.3	1074.4	1074.4
12.5°	1064.1	1062.4	1060.7	1067.6	1065.9
15°	1050.4	1050.4	1048.7	1057.3	1055.6
17.5°	1033.2	1035.0	1036.7	1043.5	1045.3
20°	1014.4	1017.8	1019.5	1029.8	1029.8
22.5°	997.2	998.9	1002.3	1012.6	1012.6
25°	974.9	978.3	985.2	993.8	995.5
27.5°	952.6	954.3	962.9	974.9	976.6
30°	923.4	928.5	938.8	952.6	954.3
32.5°	897.7	902.8	914.8	928.5	932.0
35°	865.0	871.9	885.6	902.8	906.2
37.5°	835.9	841.0	858.2	877.1	882.2
40°	799.8	810.1	827.3	849.6	858.2
42.5°	763.8	774.1	794.7	823.8	834.1
45°	726.0	738.0	763.8	796.4	810.1
47.5°	688.3	702.0	731.2	768.9	784.4
50°	645.3	662.5	698.6	741.5	758.6
52.5°	604.2	624.8	664.2	712.3	734.6
55°	561.2	581.8	633.3	683.1	707.1
57.5°	513.2	540.7	597.3	653.9	679.7
60°	468.6	494.3	563.0	624.8	650.5
62.5°	420.5	454.8	528.6	593.9	619.6
65°	370.7	408.5	492.6	557.8	583.6
67.5°	326.1	367.3	456.5	521.8	547.5
70°	272.9	324.4	417.1	482.3	508.0
72.5°	223.1	279.8	375.9	439.4	463.4
75°	175.1	238.6	333.0	389.6	401.6
77.5°	130.4	197.4	288.3	312.4	303.8
80°	92.7	157.9	224.8	212.8	218.0
82.5°	60.1	120.1	139.0	157.9	163.1
85°	34.3	70.4	85.8	92.7	96.1
87.5°	15.4	25.7	34.3	34.3	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)