

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: P391420

Luminaire Tested: **24CZ2-50VHE-HRP-UNV-L940-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: P391420
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-SWPD1-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: 3626.3 lumens
Efficiency: N/A
Efficacy: 110.9 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

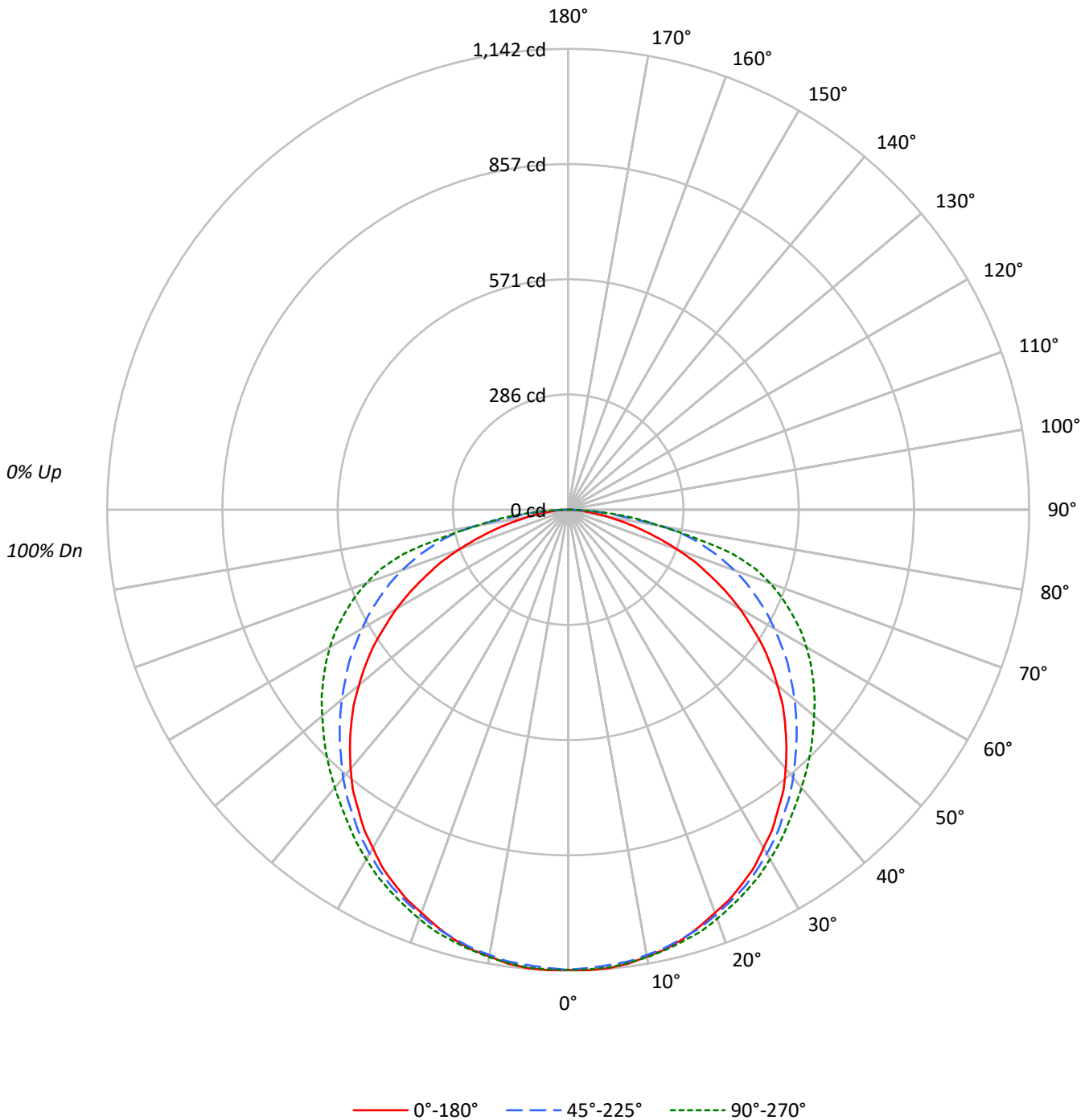
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1534	1534	1534
5°	1540	1531	1538
10°	1536	1531	1538
15°	1533	1531	1541
20°	1522	1530	1545
25°	1517	1533	1549
30°	1503	1529	1554
35°	1489	1524	1560
40°	1472	1523	1580
45°	1448	1523	1615
50°	1416	1532	1664
55°	1380	1557	1738
60°	1321	1588	1834
65°	1237	1643	1947
70°	1125	1720	2094
75°	954	1814	2188
80°	752	1826	1770
85°	556	1388	1555



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	3.0
10°-20°	311.3	8.6
20°-30°	476.1	13.1
30°-40°	582.0	16.0
40°-50°	620.3	17.1
50°-60°	593.1	16.4
60°-70°	502.4	13.9
70°-80°	337.7	9.3
80°-90°	95.2	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°	895.6	24.7
0°-40°	1477.6	40.7
0°-60°	2691.0	74.2
0°-90°	3626.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3626.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1140	1139	1133	1139	1139	108
15°	1101	1101	1099	1108	1106	310
25°	1022	1025	1032	1041	1043	471
35°	906	914	928	946	950	568
45°	761	773	800	835	849	587
55°	588	610	664	716	741	524
65°	388	428	516	585	612	386
75°	184	250	349	408	421	196
85°	36	74	90	97	101	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1140.4	1140.4	1140.4	1140.4	1140.4
2.5°	1142.2	1142.2	1136.8	1140.4	1140.4
5°	1140.4	1138.6	1133.2	1138.6	1138.6
7.5°	1135.0	1133.2	1129.6	1135.0	1133.2
10°	1124.2	1124.2	1120.6	1126.0	1126.0
12.5°	1115.2	1113.4	1111.6	1118.8	1117.0
15°	1100.8	1100.8	1099.0	1108.0	1106.2
17.5°	1082.8	1084.6	1086.4	1093.6	1095.4
20°	1063.0	1066.6	1068.4	1079.2	1079.2
22.5°	1045.0	1046.8	1050.4	1061.2	1061.2
25°	1021.7	1025.3	1032.4	1041.4	1043.2
27.5°	998.3	1000.1	1009.1	1021.7	1023.5
30°	967.7	973.1	983.9	998.3	1000.1
32.5°	940.7	946.1	958.7	973.1	976.7
35°	906.5	913.7	928.1	946.1	949.7
37.5°	876.0	881.4	899.3	919.1	924.5
40°	838.2	849.0	867.0	890.4	899.3
42.5°	800.4	811.2	832.8	863.4	874.2
45°	760.8	773.4	800.4	834.6	849.0
47.5°	721.3	735.7	766.2	805.8	822.0
50°	676.3	694.3	732.1	777.0	795.0
52.5°	633.1	654.7	696.1	746.5	769.8
55°	588.2	609.8	663.7	715.9	741.1
57.5°	537.8	566.6	625.9	685.3	712.3
60°	491.0	518.0	590.0	654.7	681.7
62.5°	440.7	476.7	554.0	622.3	649.3
65°	388.5	428.1	516.2	584.6	611.6
67.5°	341.8	384.9	478.5	546.8	573.8
70°	286.0	340.0	437.1	505.4	532.4
72.5°	233.8	293.2	393.9	460.5	485.6
75°	183.5	250.0	348.9	408.3	420.9
77.5°	136.7	206.8	302.2	327.4	318.4
80°	97.1	165.5	235.6	223.0	228.4
82.5°	63.0	125.9	145.7	165.5	170.9
85°	36.0	73.7	89.9	97.1	100.7
87.5°	16.2	27.0	36.0	36.0	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)