

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: P390173

Luminaire Tested: **22CZ2-24VHE-HRP-UNV-L940-CD1-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: P390173
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24VHE-HRP-UNV-L940-CD1-U
Description: 2x2 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: 1813.5 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

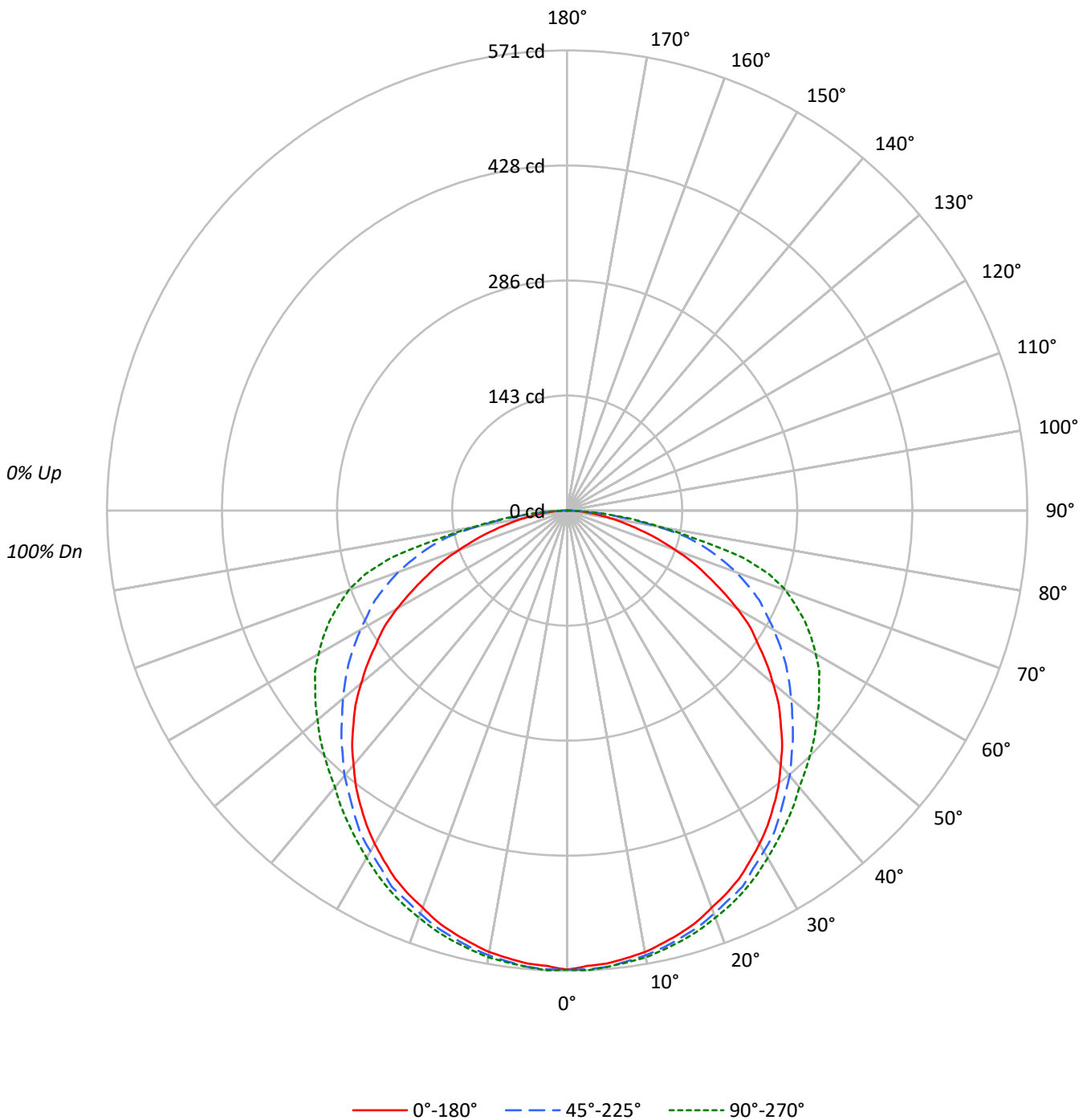
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	1533	1533	1533
5°	1524	1535	1535
10°	1520	1531	1538
15°	1513	1528	1539
20°	1501	1524	1540
25°	1497	1529	1545
30°	1484	1517	1546
35°	1468	1512	1556
40°	1448	1509	1575
45°	1427	1508	1625
50°	1396	1519	1692
55°	1358	1552	1790
60°	1314	1594	1917
65°	1223	1673	2073
70°	1123	1753	2268
75°	985	1844	2345
80°	848	1757	1839
85°	741	1278	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	3.0
10°-20°	154.7	8.5
20°-30°	236.1	13.0
30°-40°	288.2	15.9
40°-50°	308.2	17.0
50°-60°	297.5	16.4
60°-70°	256.1	14.1
70°-80°	173.2	9.6
80°-90°	45.7	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°	444.6	24.5
0°-40°	732.9	40.4
0°-60°	1338.5	73.8
0°-90°	1813.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	564	566	568	568	568	54
15°	543	544	548	551	552	153
25°	504	507	515	518	520	232
35°	447	451	460	470	474	280
45°	375	382	396	416	427	289
55°	290	299	331	364	382	259
65°	192	211	263	304	326	191
75°	95	125	177	214	226	102
85°	24	33	41	43	45	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	569.7	569.7	569.7	569.7	569.7
2.5°	565.6	567.0	569.7	569.7	571.0
5°	564.3	565.6	568.3	568.3	568.3
7.5°	560.3	561.6	564.3	565.6	565.6
10°	556.3	557.6	560.3	561.6	563.0
12.5°	549.6	551.0	555.0	557.6	557.6
15°	543.0	544.3	548.3	551.0	552.3
17.5°	535.0	537.6	541.6	544.3	545.6
20°	524.3	527.0	532.3	536.3	537.6
22.5°	515.0	517.6	523.0	527.0	529.6
25°	504.3	507.0	515.0	517.6	520.3
27.5°	490.9	493.6	500.3	505.6	509.6
30°	477.6	480.3	488.3	494.9	497.6
32.5°	462.9	466.9	476.3	481.6	485.6
35°	446.9	450.9	460.3	469.6	473.6
37.5°	430.9	434.9	444.2	456.3	461.6
40°	412.2	417.6	429.6	445.6	448.3
42.5°	394.9	401.6	412.2	430.9	437.6
45°	374.9	381.5	396.2	416.2	426.9
47.5°	356.2	362.9	378.9	402.9	416.2
50°	333.5	342.9	362.9	390.9	404.2
52.5°	312.2	320.2	346.9	377.5	393.6
55°	289.5	298.8	330.9	364.2	381.5
57.5°	269.5	277.5	313.5	350.9	370.9
60°	244.1	254.8	296.2	336.2	356.2
62.5°	217.5	233.5	278.8	320.2	341.5
65°	192.1	210.8	262.8	304.2	325.5
67.5°	169.4	189.4	242.8	286.8	306.8
70°	142.7	168.1	222.8	265.5	288.2
72.5°	118.7	146.7	200.1	242.8	262.8
75°	94.7	125.4	177.4	213.5	225.5
77.5°	73.4	102.7	152.1	162.8	164.1
80°	54.7	81.4	113.4	114.7	118.7
82.5°	37.4	57.4	73.4	80.0	81.4
85°	24.0	33.4	41.4	42.7	45.4
87.5°	10.7	12.0	14.7	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)