

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: P390171

Luminaire Tested: **22CZ2-24VHE-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: P390171
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-SDWPD1-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: 1769.4 lumens
Efficiency: N/A
Efficacy: 101.1 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

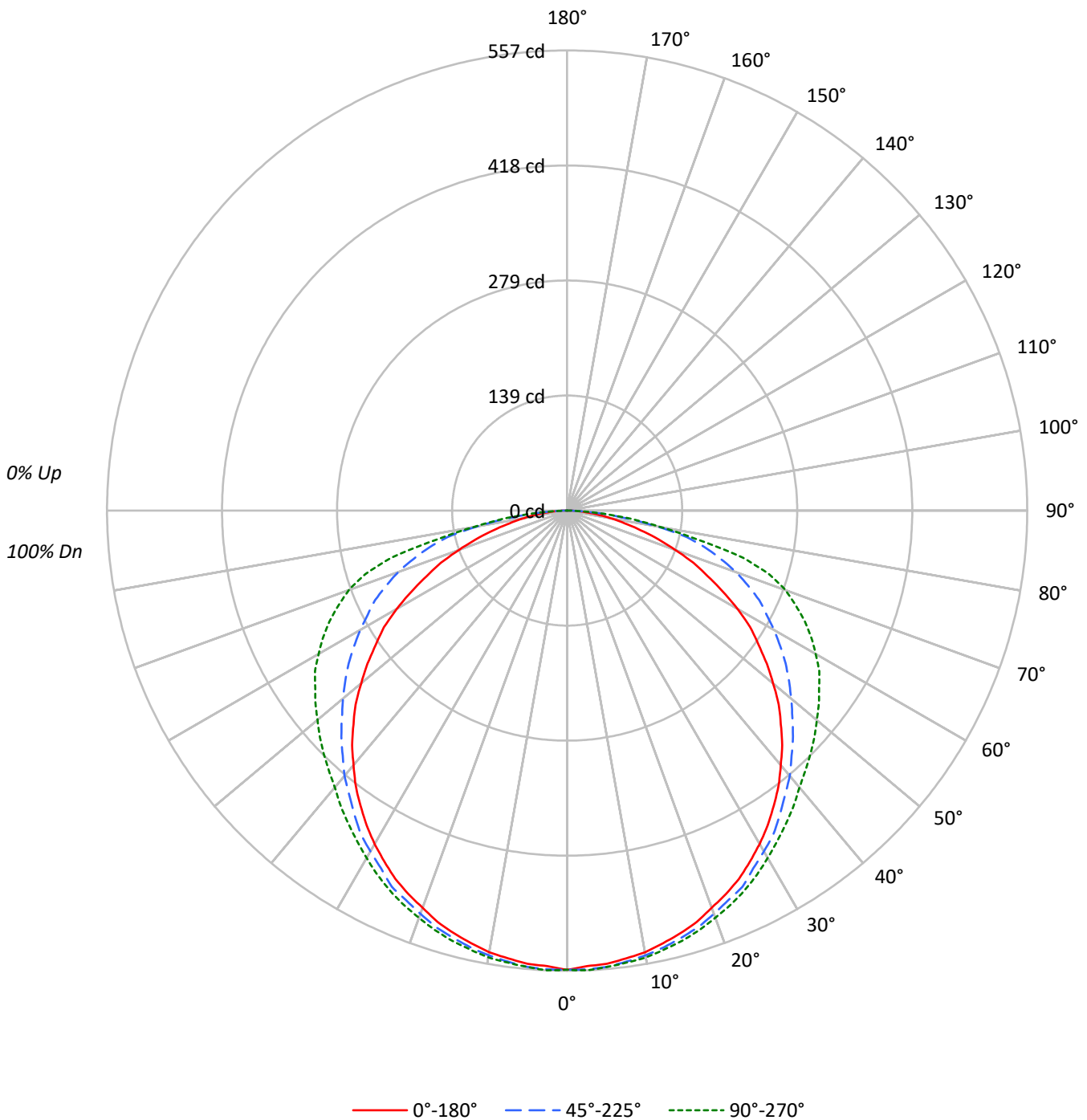
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P390171

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L940-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P390171

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L940-CD1-SDWPD1-U

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°	1496	1496	1496
5°	1487	1498	1498
10°	1483	1494	1501
15°	1476	1490	1501
20°	1465	1487	1502
25°	1461	1492	1507
30°	1448	1480	1509
35°	1432	1475	1518
40°	1413	1472	1537
45°	1392	1471	1585
50°	1362	1482	1651
55°	1325	1514	1747
60°	1282	1555	1870
65°	1193	1633	2022
70°	1096	1710	2212
75°	961	1800	2287
80°	828	1714	1795
85°	722	1247	1368



TEST NUMBER: P390171

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L940-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.6	3.0
10°-20°	151.0	8.5
20°-30°	230.3	13.0
30°-40°	281.2	15.9
40°-50°	300.7	17.0
50°-60°	290.2	16.4
60°-70°	249.8	14.1
70°-80°	169.0	9.6
80°-90°	44.6	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°	433.8	24.5
0°-40°	715.0	40.4
0°-60°	1305.9	73.8
0°-90°	1769.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1769.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	556	556	556	556	556	
5°	551	552	554	554	554	52
15°	530	531	535	538	539	149
25°	492	495	502	505	508	226
35°	436	440	449	458	462	273
45°	366	372	387	406	416	282
55°	282	292	323	355	372	253
65°	187	206	256	297	318	186
75°	92	122	173	208	220	99
85°	23	32	40	42	44	26
90°	0	0	0	0	0	



TEST NUMBER: P390171

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L940-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	555.8	555.8	555.8	555.8	555.8
2.5°	551.9	553.2	555.8	555.8	557.1
5°	550.6	551.9	554.5	554.5	554.5
7.5°	546.7	548.0	550.6	551.9	551.9
10°	542.8	544.1	546.7	548.0	549.3
12.5°	536.3	537.6	541.5	544.1	544.1
15°	529.8	531.1	535.0	537.6	538.9
17.5°	522.0	524.6	528.5	531.1	532.4
20°	511.5	514.1	519.4	523.3	524.6
22.5°	502.4	505.0	510.2	514.1	516.8
25°	492.0	494.6	502.4	505.0	507.6
27.5°	479.0	481.6	488.1	493.3	497.2
30°	466.0	468.6	476.4	482.9	485.5
32.5°	451.7	455.6	464.7	469.9	473.8
35°	436.0	440.0	449.1	458.2	462.1
37.5°	420.4	424.3	433.4	445.2	450.4
40°	402.2	407.4	419.1	434.7	437.4
42.5°	385.3	391.8	402.2	420.4	426.9
45°	365.8	372.3	386.6	406.1	416.5
47.5°	347.5	354.0	369.7	393.1	406.1
50°	325.4	334.5	354.0	381.4	394.4
52.5°	304.6	312.4	338.4	368.4	384.0
55°	282.5	291.6	322.8	355.3	372.3
57.5°	262.9	270.7	305.9	342.3	361.9
60°	238.2	248.6	289.0	328.0	347.5
62.5°	212.2	227.8	272.0	312.4	333.2
65°	187.4	205.7	256.4	296.8	317.6
67.5°	165.3	184.8	236.9	279.9	299.4
70°	139.3	164.0	217.4	259.0	281.2
72.5°	115.8	143.2	195.2	236.9	256.4
75°	92.4	122.4	173.1	208.3	220.0
77.5°	71.6	100.2	148.4	158.8	160.1
80°	53.4	79.4	110.6	111.9	115.8
82.5°	36.4	56.0	71.6	78.1	79.4
85°	23.4	32.5	40.4	41.7	44.3
87.5°	10.4	11.7	14.3	13.0	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)