

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: P390168

Luminaire Tested: **22CZ2-24VHE-HRP-UNV-L935-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: P390168
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-L935-CD1-SDWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1751.2 lumens
Efficiency: N/A
Efficacy: 100.1 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

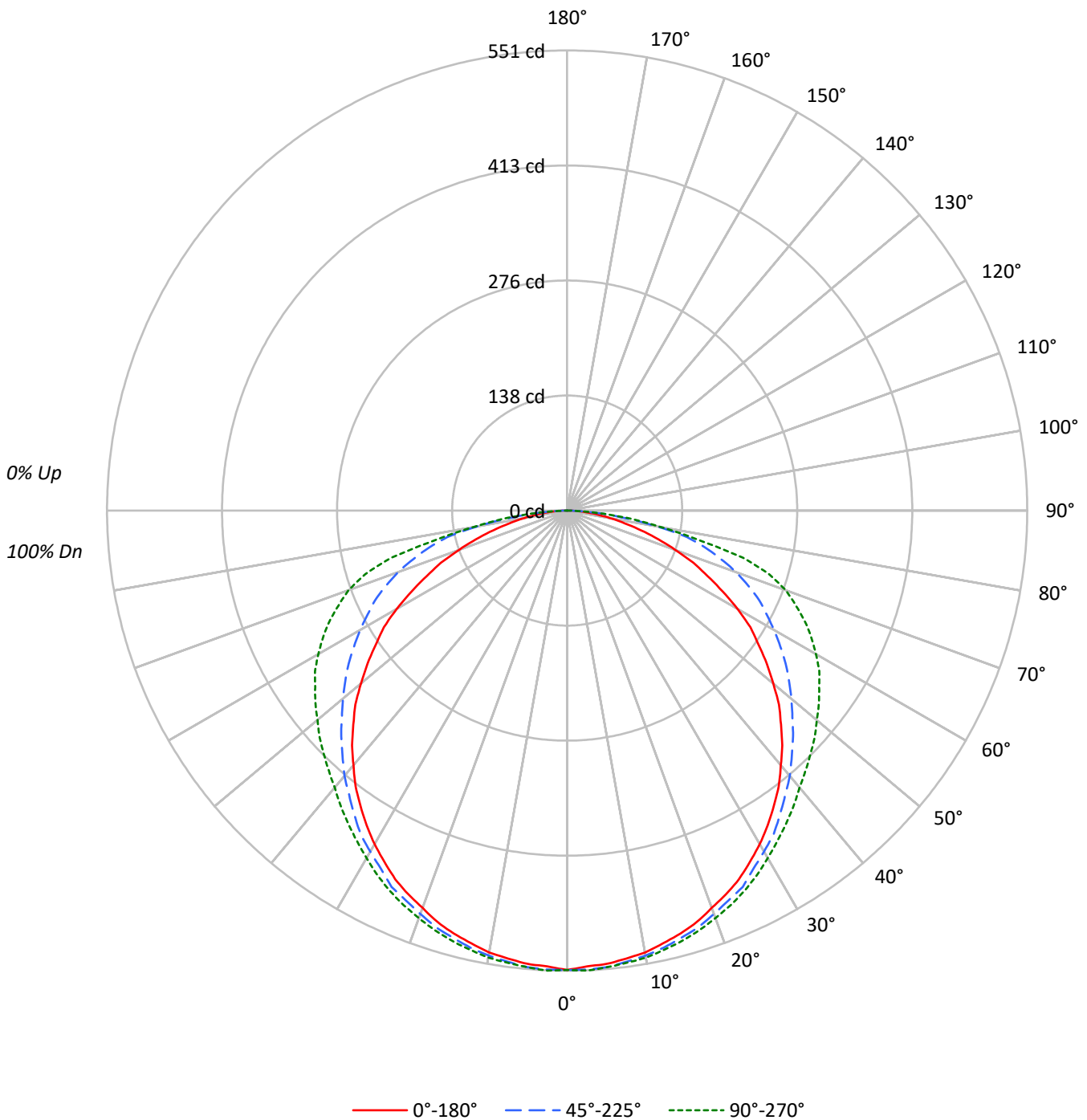
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P390168

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L935-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P390168

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L935-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°	1480	1480	1480
5°	1472	1482	1482
10°	1468	1479	1485
15°	1461	1475	1486
20°	1450	1472	1487
25°	1446	1477	1492
30°	1433	1465	1493
35°	1418	1460	1502
40°	1398	1457	1521
45°	1378	1456	1569
50°	1348	1467	1634
55°	1312	1499	1728
60°	1269	1539	1851
65°	1181	1616	2001
70°	1084	1692	2190
75°	951	1781	2263
80°	818	1697	1777
85°	716	1232	1352



TEST NUMBER: P390168

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L935-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	3.0
10°-20°	149.4	8.5
20°-30°	227.9	13.0
30°-40°	278.3	15.9
40°-50°	297.6	17.0
50°-60°	287.2	16.4
60°-70°	247.3	14.1
70°-80°	167.3	9.6
80°-90°	44.1	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°	429.4	24.5
0°-40°	707.7	40.4
0°-60°	1292.5	73.8
0°-90°	1751.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1751.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	545	546	549	549	549	52
15°	524	526	530	532	533	148
25°	487	490	497	500	502	224
35°	432	435	444	454	457	270
45°	362	368	383	402	412	279
55°	280	289	320	352	368	251
65°	186	204	254	294	314	184
75°	92	121	171	206	218	98
85°	23	32	40	41	44	26
90°	0	0	0	0	0	



TEST NUMBER: P390168

CATALOG NUMBER: 22CZ2-24VHE-HRP-UNV-L935-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	550.1	550.1	550.1	550.1	550.1
2.5°	546.2	547.5	550.1	550.1	551.4
5°	544.9	546.2	548.8	548.8	548.8
7.5°	541.1	542.4	544.9	546.2	546.2
10°	537.2	538.5	541.1	542.4	543.6
12.5°	530.8	532.0	535.9	538.5	538.5
15°	524.3	525.6	529.5	532.0	533.3
17.5°	516.6	519.2	523.0	525.6	526.9
20°	506.3	508.9	514.0	517.9	519.2
22.5°	497.3	499.8	505.0	508.9	511.4
25°	487.0	489.5	497.3	499.8	502.4
27.5°	474.1	476.7	483.1	488.2	492.1
30°	461.2	463.8	471.5	477.9	480.5
32.5°	447.0	450.9	459.9	465.1	468.9
35°	431.6	435.4	444.4	453.5	457.3
37.5°	416.1	420.0	429.0	440.6	445.7
40°	398.1	403.2	414.8	430.3	432.9
42.5°	381.3	387.8	398.1	416.1	422.5
45°	362.0	368.4	382.6	401.9	412.2
47.5°	344.0	350.4	365.9	389.1	401.9
50°	322.1	331.1	350.4	377.5	390.3
52.5°	301.5	309.2	334.9	364.6	380.0
55°	279.6	288.6	319.5	351.7	368.4
57.5°	260.2	268.0	302.7	338.8	358.1
60°	235.7	246.1	286.0	324.6	344.0
62.5°	210.0	225.4	269.2	309.2	329.8
65°	185.5	203.5	253.8	293.7	314.3
67.5°	163.6	182.9	234.5	277.0	296.3
70°	137.8	162.3	215.1	256.4	278.3
72.5°	114.7	141.7	193.2	234.5	253.8
75°	91.5	121.1	171.3	206.1	217.7
77.5°	70.9	99.2	146.9	157.2	158.5
80°	52.8	78.6	109.5	110.8	114.7
82.5°	36.1	55.4	70.9	77.3	78.6
85°	23.2	32.2	39.9	41.2	43.8
87.5°	10.3	11.6	14.2	12.9	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)