

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: P390074

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L935-CD2-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: P390074
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: 22CZ2-110VHE-HRP-UNV-L935-CD2-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: 7941.0 lumens
Efficiency: N/A
Efficacy: 90.5 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

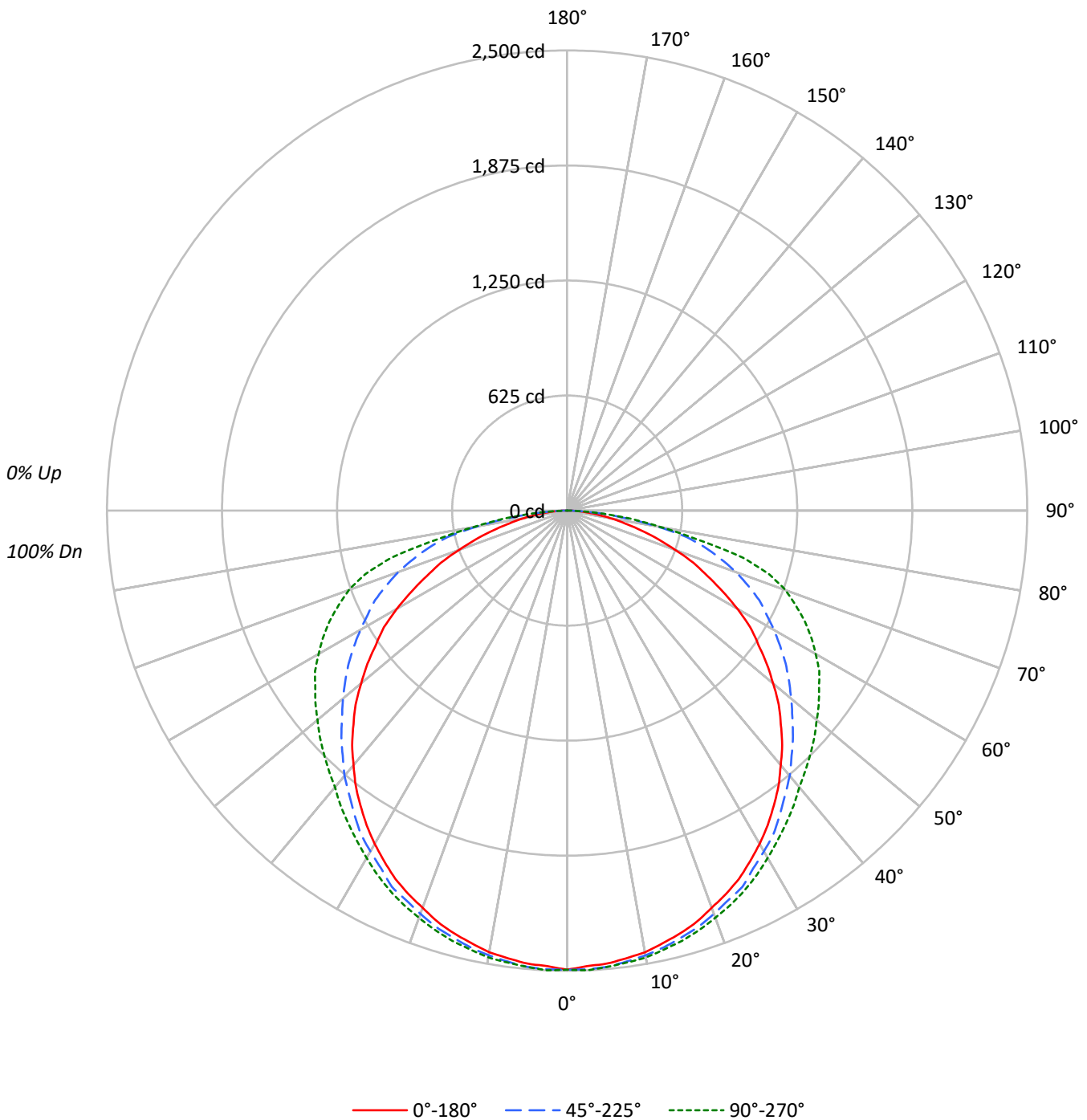
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6712	6712	6712
5°	6675	6722	6722
10°	6656	6704	6736
15°	6624	6689	6738
20°	6574	6675	6742
25°	6557	6695	6765
30°	6498	6644	6771
35°	6429	6621	6813
40°	6341	6608	6895
45°	6247	6603	7114
50°	6114	6652	7410
55°	5947	6797	7838
60°	5753	6980	8394
65°	5356	7328	9076
70°	4918	7676	9928
75°	4313	8078	10264
80°	3711	7694	8057
85°	3248	5592	6132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.0	3.0
10°-20°	677.5	8.5
20°-30°	1033.6	13.0
30°-40°	1262.1	15.9
40°-50°	1349.4	17.0
50°-60°	1302.5	16.4
60°-70°	1121.2	14.1
70°-80°	758.6	9.6
80°-90°	200.2	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°	1947.0	24.5
0°-40°	3209.1	40.4
0°-60°	5861.0	73.8
0°-90°	7941.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7941.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2494	2494	2494	2494	2494	
5°	2471	2477	2489	2489	2489	235
15°	2378	2383	2401	2413	2418	671
25°	2208	2220	2255	2267	2278	1016
35°	1957	1974	2015	2056	2074	1225
45°	1642	1671	1735	1823	1869	1267
55°	1268	1308	1449	1595	1671	1136
65°	841	923	1151	1332	1425	837
75°	415	549	777	935	987	445
85°	105	146	181	187	199	118
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2494.4	2494.4	2494.4	2494.4	2494.4
2.5°	2476.9	2482.7	2494.4	2494.4	2500.2
5°	2471.0	2476.9	2488.6	2488.6	2488.6
7.5°	2453.5	2459.4	2471.0	2476.9	2476.9
10°	2436.0	2441.8	2453.5	2459.4	2465.2
12.5°	2406.8	2412.6	2430.1	2441.8	2441.8
15°	2377.6	2383.4	2400.9	2412.6	2418.5
17.5°	2342.5	2354.2	2371.7	2383.4	2389.3
20°	2295.8	2307.5	2330.8	2348.4	2354.2
22.5°	2254.9	2266.6	2289.9	2307.5	2319.2
25°	2208.2	2219.8	2254.9	2266.6	2278.3
27.5°	2149.7	2161.4	2190.6	2214.0	2231.5
30°	2091.3	2103.0	2138.1	2167.3	2179.0
32.5°	2027.1	2044.6	2085.5	2108.9	2126.4
35°	1957.0	1974.5	2015.4	2056.3	2073.8
37.5°	1886.9	1904.4	1945.3	1997.9	2021.2
40°	1805.1	1828.5	1881.0	1951.1	1962.8
42.5°	1729.1	1758.4	1805.1	1886.9	1916.1
45°	1641.5	1670.7	1735.0	1822.6	1869.3
47.5°	1559.7	1588.9	1659.0	1764.2	1822.6
50°	1460.4	1501.3	1588.9	1711.6	1770.0
52.5°	1367.0	1402.0	1518.8	1653.2	1723.3
55°	1267.6	1308.5	1448.7	1594.8	1670.7
57.5°	1180.0	1215.1	1372.8	1536.4	1624.0
60°	1069.0	1115.8	1296.9	1472.1	1559.7
62.5°	952.2	1022.3	1220.9	1402.0	1495.5
65°	841.2	923.0	1150.8	1331.9	1425.4
67.5°	741.9	829.5	1063.2	1256.0	1343.6
70°	625.1	736.1	975.6	1162.5	1261.8
72.5°	519.9	642.6	876.3	1063.2	1150.8
75°	414.8	549.1	776.9	934.7	987.2
77.5°	321.3	449.8	666.0	712.7	718.5
80°	239.5	356.3	496.5	502.4	519.9
82.5°	163.6	251.2	321.3	350.5	356.3
85°	105.2	146.0	181.1	186.9	198.6
87.5°	46.7	52.6	64.3	58.4	58.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)