

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: P390940

Luminaire Tested: **24CZ2-110VHE-HRP-UNV-L940-CD2-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: P390940
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: 24CZ2-110VHE-HRP-UNV-L940-CD2-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: 7947.3 lumens
Efficiency: N/A
Efficacy: 102.7 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

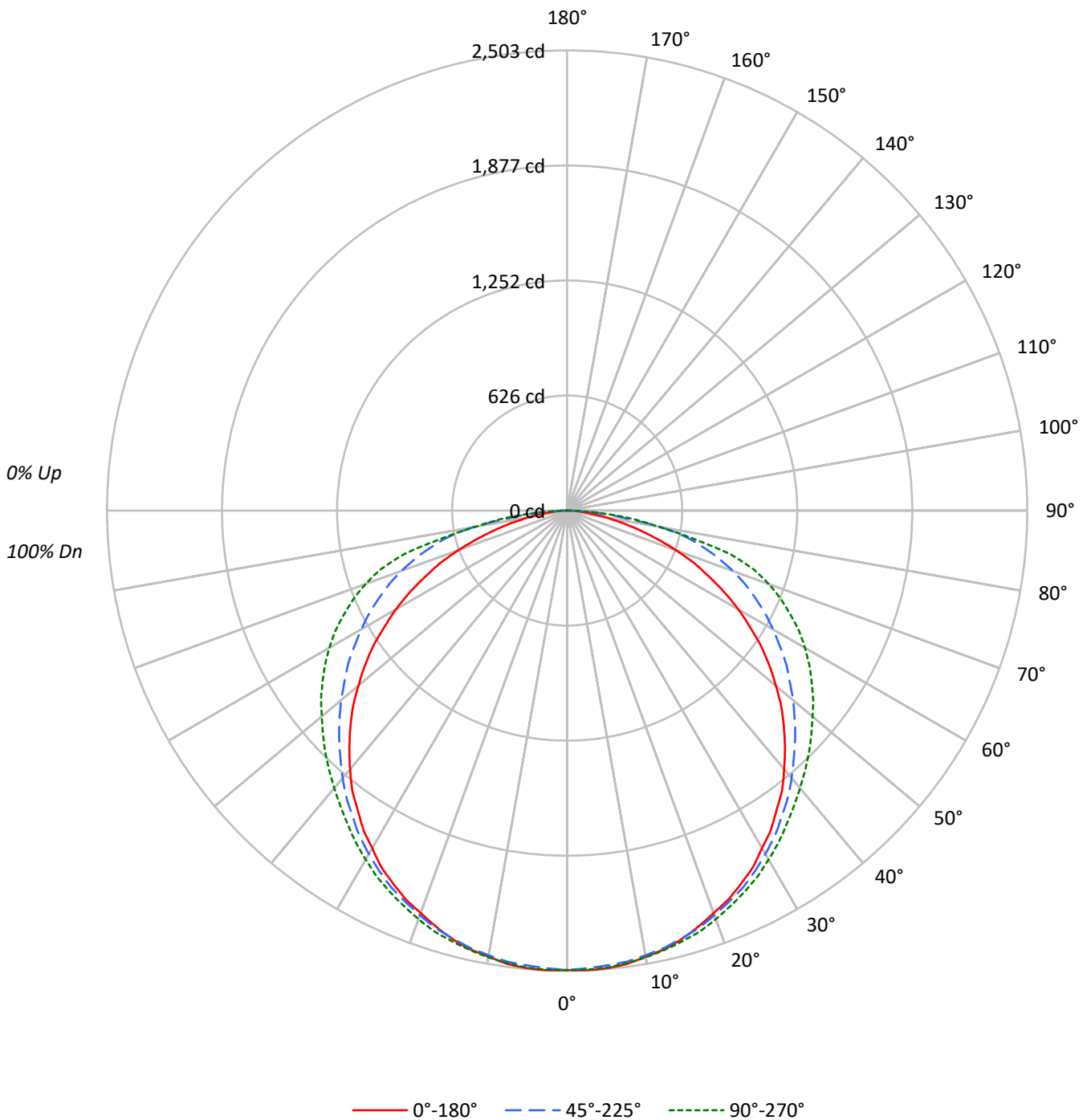
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	3363	3363	3363
5°	3375	3354	3370
10°	3366	3355	3371
15°	3360	3355	3377
20°	3336	3353	3387
25°	3324	3359	3394
30°	3295	3350	3405
35°	3263	3341	3419
40°	3227	3337	3462
45°	3173	3338	3540
50°	3103	3358	3647
55°	3024	3412	3810
60°	2896	3479	4020
65°	2711	3602	4267
70°	2466	3768	4590
75°	2090	3975	4795
80°	1650	4001	3879
85°	1216	3043	3407



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.1	3.0
10°-20°	682.3	8.6
20°-30°	1043.4	13.1
30°-40°	1275.5	16.0
40°-50°	1359.4	17.1
50°-60°	1299.8	16.4
60°-70°	1101.1	13.9
70°-80°	740.0	9.3
80°-90°	208.7	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°	1962.7	24.7
0°-40°	3238.2	40.7
0°-60°	5897.5	74.2
0°-90°	7947.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7947.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2499	2499	2499	2499	2499	
5°	2499	2495	2483	2495	2495	237
15°	2412	2412	2408	2428	2424	680
25°	2239	2247	2263	2282	2286	1032
35°	1987	2002	2034	2074	2081	1245
45°	1667	1695	1754	1829	1861	1286
55°	1289	1336	1455	1569	1624	1148
65°	852	938	1131	1281	1340	845
75°	402	548	765	895	922	431
85°	79	162	197	213	221	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2499.2	2499.2	2499.2	2499.2	2499.2
2.5°	2503.1	2503.1	2491.3	2499.2	2499.2
5°	2499.2	2495.3	2483.4	2495.3	2495.3
7.5°	2487.4	2483.4	2475.5	2487.4	2483.4
10°	2463.7	2463.7	2455.8	2467.7	2467.7
12.5°	2444.0	2440.1	2436.1	2451.9	2448.0
15°	2412.5	2412.5	2408.5	2428.2	2424.3
17.5°	2373.1	2377.0	2380.9	2396.7	2400.7
20°	2329.7	2337.6	2341.5	2365.2	2365.2
22.5°	2290.3	2294.2	2302.1	2325.8	2325.8
25°	2239.0	2246.9	2262.7	2282.4	2286.3
27.5°	2187.8	2191.7	2211.4	2239.0	2243.0
30°	2120.8	2132.6	2156.2	2187.8	2191.7
32.5°	2061.6	2073.5	2101.1	2132.6	2140.5
35°	1986.7	2002.5	2034.0	2073.5	2081.4
37.5°	1919.7	1931.6	1971.0	2014.3	2026.2
40°	1837.0	1860.6	1900.0	1951.3	1971.0
42.5°	1754.2	1777.8	1825.1	1892.1	1915.8
45°	1667.4	1695.0	1754.2	1829.1	1860.6
47.5°	1580.7	1612.3	1679.3	1766.0	1801.5
50°	1482.2	1521.6	1604.4	1702.9	1742.3
52.5°	1387.6	1434.9	1525.5	1635.9	1687.2
55°	1289.0	1336.3	1454.6	1568.9	1624.1
57.5°	1178.6	1241.7	1371.8	1501.9	1561.0
60°	1076.2	1135.3	1293.0	1434.9	1494.0
62.5°	965.8	1044.6	1214.1	1363.9	1423.0
65°	851.5	938.2	1131.3	1281.1	1340.3
67.5°	749.0	843.6	1048.6	1198.4	1257.5
70°	626.8	745.0	957.9	1107.7	1166.8
72.5°	512.5	642.5	863.3	1009.1	1064.3
75°	402.1	547.9	764.7	894.8	922.4
77.5°	299.6	453.3	662.2	717.4	697.7
80°	212.9	362.7	516.4	488.8	500.6
82.5°	138.0	275.9	319.3	362.7	374.5
85°	78.8	161.6	197.1	212.9	220.7
87.5°	35.5	59.1	78.8	78.8	74.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)