

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: P388615

Luminaire Tested: **24CZ2-110VHE-UNV-L950-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: P388615
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-UNV-L950-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9937.8 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

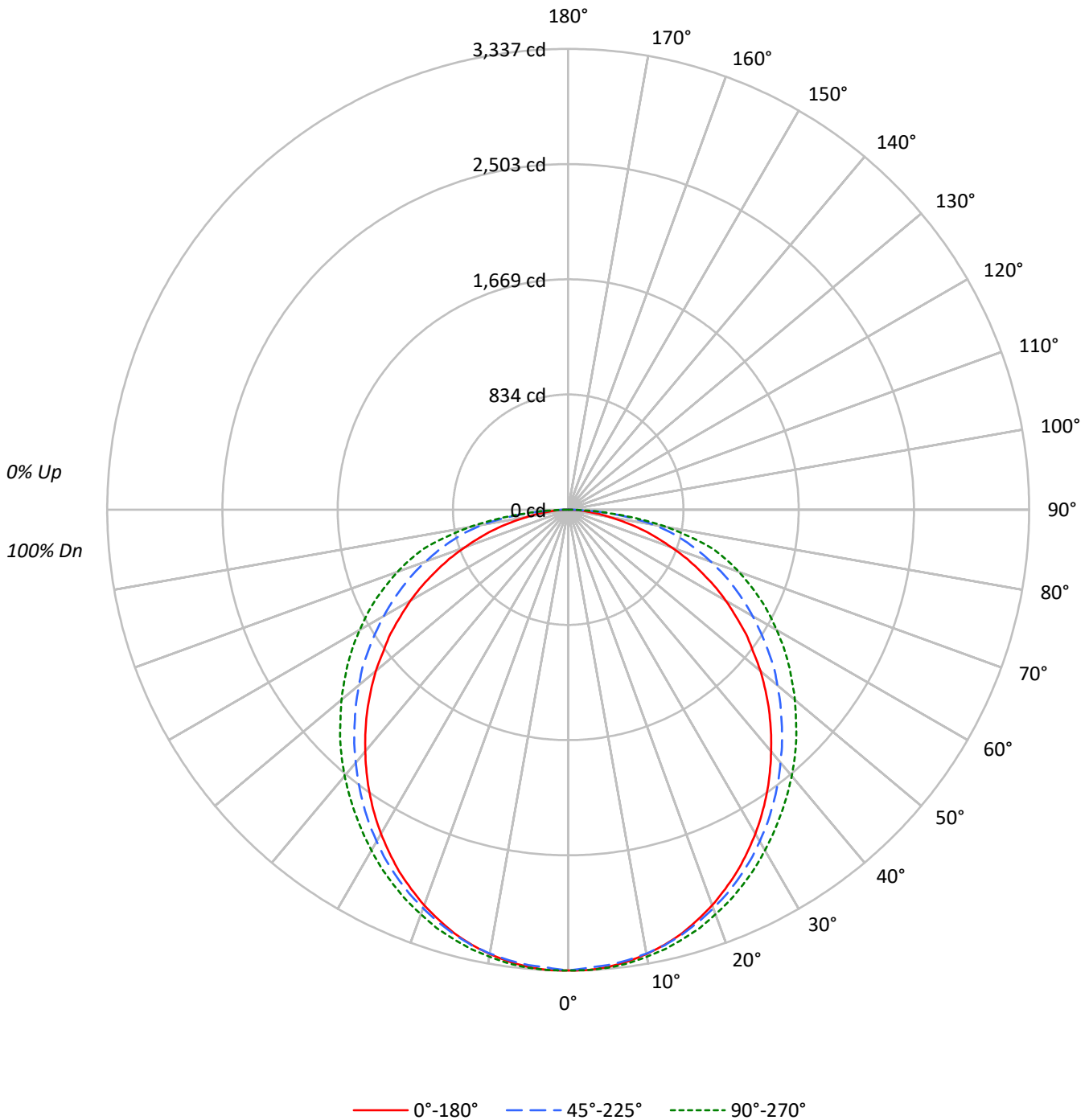
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4489	4489	4489
5°	4489	4471	4497
10°	4463	4459	4491
15°	4426	4435	4481
20°	4364	4397	4464
25°	4294	4358	4446
30°	4210	4308	4426
35°	4119	4255	4413
40°	4014	4200	4422
45°	3913	4159	4443
50°	3804	4138	4485
55°	3688	4131	4567
60°	3543	4150	4686
65°	3358	4213	4889
70°	3118	4319	5167
75°	2845	4535	5604
80°	2338	4883	5602
85°	1792	4506	4813



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.6	3.2
10°-20°	900.9	9.1
20°-30°	1355.7	13.6
30°-40°	1624.7	16.3
40°-50°	1693.1	17.0
50°-60°	1575.2	15.9
60°-70°	1297.4	13.1
70°-80°	883.6	8.9
80°-90°	291.7	2.9
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°	2572.2	25.9
0°-40°	4196.8	42.2
0°-60°	7465.1	75.1
0°-90°	9937.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9937.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3337	3337	3337	3337	3337	
5°	3323	3323	3310	3327	3330	315
15°	3177	3181	3184	3214	3217	895
25°	2892	2905	2935	2985	2995	1331
35°	2507	2537	2590	2660	2686	1567
45°	2056	2100	2186	2295	2335	1586
55°	1572	1625	1761	1900	1947	1401
65°	1055	1144	1323	1479	1536	1047
75°	547	670	872	1028	1078	577
85°	116	226	292	312	312	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3336.6	3336.6	3336.6	3336.6	3336.6
2.5°	3336.6	3336.6	3320.0	3336.6	3336.6
5°	3323.3	3323.3	3310.0	3326.6	3329.9
7.5°	3300.1	3303.4	3290.1	3310.0	3313.4
10°	3266.9	3270.2	3263.6	3283.5	3286.8
12.5°	3227.1	3230.4	3230.4	3253.7	3257.0
15°	3177.4	3180.7	3184.0	3213.9	3217.2
17.5°	3114.4	3124.3	3130.9	3167.4	3174.1
20°	3048.0	3058.0	3071.2	3111.0	3117.7
22.5°	2971.7	2985.0	3008.2	3051.3	3061.3
25°	2892.1	2905.4	2935.3	2985.0	2995.0
27.5°	2802.6	2822.5	2859.0	2912.0	2925.3
30°	2709.7	2729.6	2772.7	2829.1	2849.0
32.5°	2610.2	2636.8	2686.5	2749.5	2769.4
35°	2507.4	2537.3	2590.3	2660.0	2686.5
37.5°	2398.0	2431.1	2494.1	2570.4	2603.6
40°	2285.2	2325.0	2391.3	2480.9	2517.4
42.5°	2172.4	2208.9	2291.8	2388.0	2427.8
45°	2056.3	2099.5	2185.7	2295.1	2334.9
47.5°	1936.9	1980.1	2082.9	2199.0	2235.4
50°	1817.5	1860.7	1976.7	2099.5	2142.6
52.5°	1688.2	1744.6	1877.2	2000.0	2043.1
55°	1572.1	1625.2	1761.2	1900.5	1946.9
57.5°	1439.4	1502.5	1651.7	1797.6	1847.4
60°	1316.7	1383.1	1542.3	1691.5	1741.3
62.5°	1190.7	1263.7	1432.8	1585.4	1641.8
65°	1054.7	1144.3	1323.4	1479.2	1535.6
67.5°	932.0	1024.9	1213.9	1373.1	1422.9
70°	792.7	905.5	1097.8	1257.0	1313.4
72.5°	673.3	786.1	988.4	1144.3	1200.6
75°	547.3	670.0	872.3	1028.2	1077.9
77.5°	421.2	557.2	759.5	878.9	895.5
80°	301.8	444.4	630.2	699.8	723.0
82.5°	212.3	341.6	464.3	510.8	524.0
85°	116.1	225.5	291.9	311.8	311.8
87.5°	49.8	96.2	116.1	119.4	122.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)