

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: P388614

Luminaire Tested: **24CZ2-110VHE-UNV-L950-CD2-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: P388614
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-SDWPD1-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: 9817.9 lumens
Efficiency: N/A
Efficacy: 126.8 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

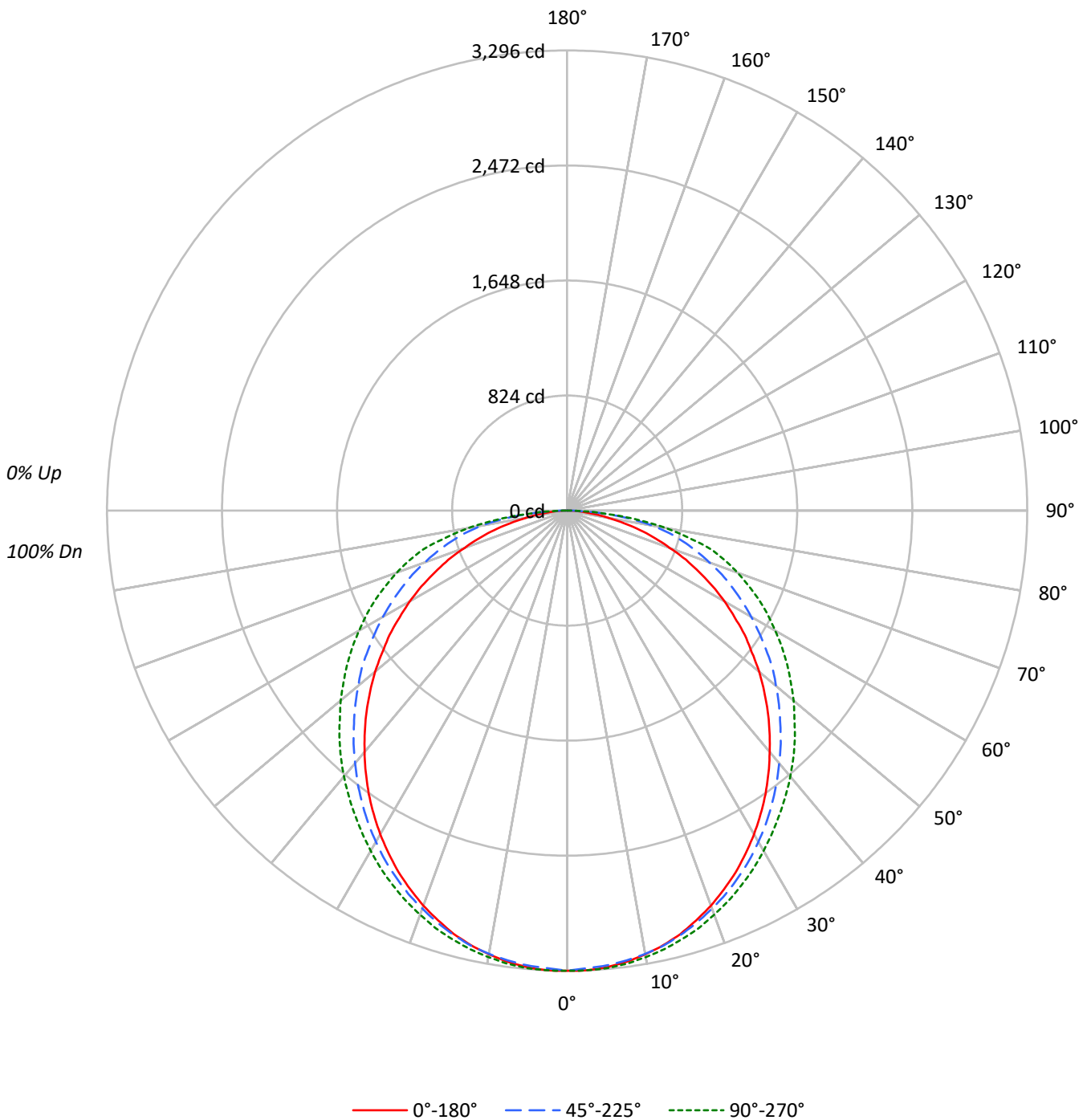
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388614

CATALOG NUMBER: 24CZ2-110VHE-UNV-L950-CD2-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388614

CATALOG NUMBER: 24CZ2-110VHE-UNV-L950-CD2-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	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°	4435	4435	4435
5°	4434	4417	4443
10°	4410	4405	4436
15°	4372	4382	4427
20°	4312	4344	4410
25°	4242	4305	4393
30°	4159	4256	4373
35°	4069	4203	4359
40°	3965	4150	4368
45°	3866	4109	4389
50°	3759	4088	4431
55°	3643	4081	4512
60°	3500	4100	4629
65°	3317	4162	4830
70°	3081	4267	5105
75°	2810	4480	5536
80°	2311	4824	5535
85°	1771	4451	4755



TEST NUMBER: P388614

CATALOG NUMBER: 24CZ2-110VHE-UNV-L950-CD2-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.8	3.2
10°-20°	890.0	9.1
20°-30°	1339.4	13.6
30°-40°	1605.1	16.3
40°-50°	1672.6	17.0
50°-60°	1556.2	15.9
60°-70°	1281.7	13.1
70°-80°	872.9	8.9
80°-90°	288.2	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°	2541.1	25.9
0°-40°	4146.2	42.2
0°-60°	7375.1	75.1
0°-90°	9817.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9817.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3296	3296	3296	3296	3296	
5°	3283	3283	3270	3286	3290	312
15°	3139	3142	3146	3175	3178	884
25°	2857	2870	2900	2949	2959	1315
35°	2477	2507	2559	2628	2654	1548
45°	2032	2074	2159	2268	2307	1567
55°	1553	1606	1740	1878	1923	1384
65°	1042	1130	1307	1461	1517	1034
75°	541	662	862	1016	1065	570
85°	115	223	288	308	308	142
90°	0	0	0	0	0	



TEST NUMBER: P388614

CATALOG NUMBER: 24CZ2-110VHE-UNV-L950-CD2-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3296.3	3296.3	3296.3	3296.3	3296.3
2.5°	3296.3	3296.3	3279.9	3296.3	3296.3
5°	3283.2	3283.2	3270.1	3286.5	3289.8
7.5°	3260.3	3263.6	3250.5	3270.1	3273.4
10°	3227.5	3230.8	3224.2	3243.9	3247.2
12.5°	3188.2	3191.5	3191.5	3214.4	3217.7
15°	3139.0	3142.3	3145.6	3175.1	3178.4
17.5°	3076.8	3086.6	3093.2	3129.2	3135.8
20°	3011.3	3021.1	3034.2	3073.5	3080.1
22.5°	2935.9	2949.0	2971.9	3014.5	3024.4
25°	2857.3	2870.4	2899.8	2949.0	2958.8
27.5°	2768.8	2788.4	2824.5	2876.9	2890.0
30°	2677.0	2696.7	2739.3	2795.0	2814.7
32.5°	2578.7	2604.9	2654.1	2716.4	2736.0
35°	2477.2	2506.6	2559.1	2627.9	2654.1
37.5°	2369.0	2401.8	2464.1	2539.4	2572.2
40°	2257.6	2296.9	2362.5	2450.9	2487.0
42.5°	2146.2	2182.3	2264.2	2359.2	2398.5
45°	2031.5	2074.1	2159.3	2267.5	2306.8
47.5°	1913.6	1956.2	2057.7	2172.4	2208.5
50°	1795.6	1838.2	1952.9	2074.1	2116.7
52.5°	1667.8	1723.5	1854.6	1975.8	2018.4
55°	1553.1	1605.6	1739.9	1877.5	1923.4
57.5°	1422.1	1484.3	1631.8	1776.0	1825.1
60°	1300.8	1366.4	1523.6	1671.1	1720.2
62.5°	1176.3	1248.4	1415.5	1566.2	1621.9
65°	1042.0	1130.4	1307.4	1461.4	1517.1
67.5°	920.7	1012.5	1199.3	1356.5	1405.7
70°	783.1	894.5	1084.6	1241.9	1297.6
72.5°	665.2	776.6	976.4	1130.4	1186.2
75°	540.6	661.9	861.8	1015.8	1064.9
77.5°	416.1	550.5	750.4	868.3	884.7
80°	298.2	439.1	622.6	691.4	714.3
82.5°	209.7	337.5	458.7	504.6	517.7
85°	114.7	222.8	288.3	308.0	308.0
87.5°	49.1	95.0	114.7	118.0	121.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)