

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: P389547

Luminaire Tested: **24CZ2-110VHE-S-UNV-L940-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: P389547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-S-UNV-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9719.0 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

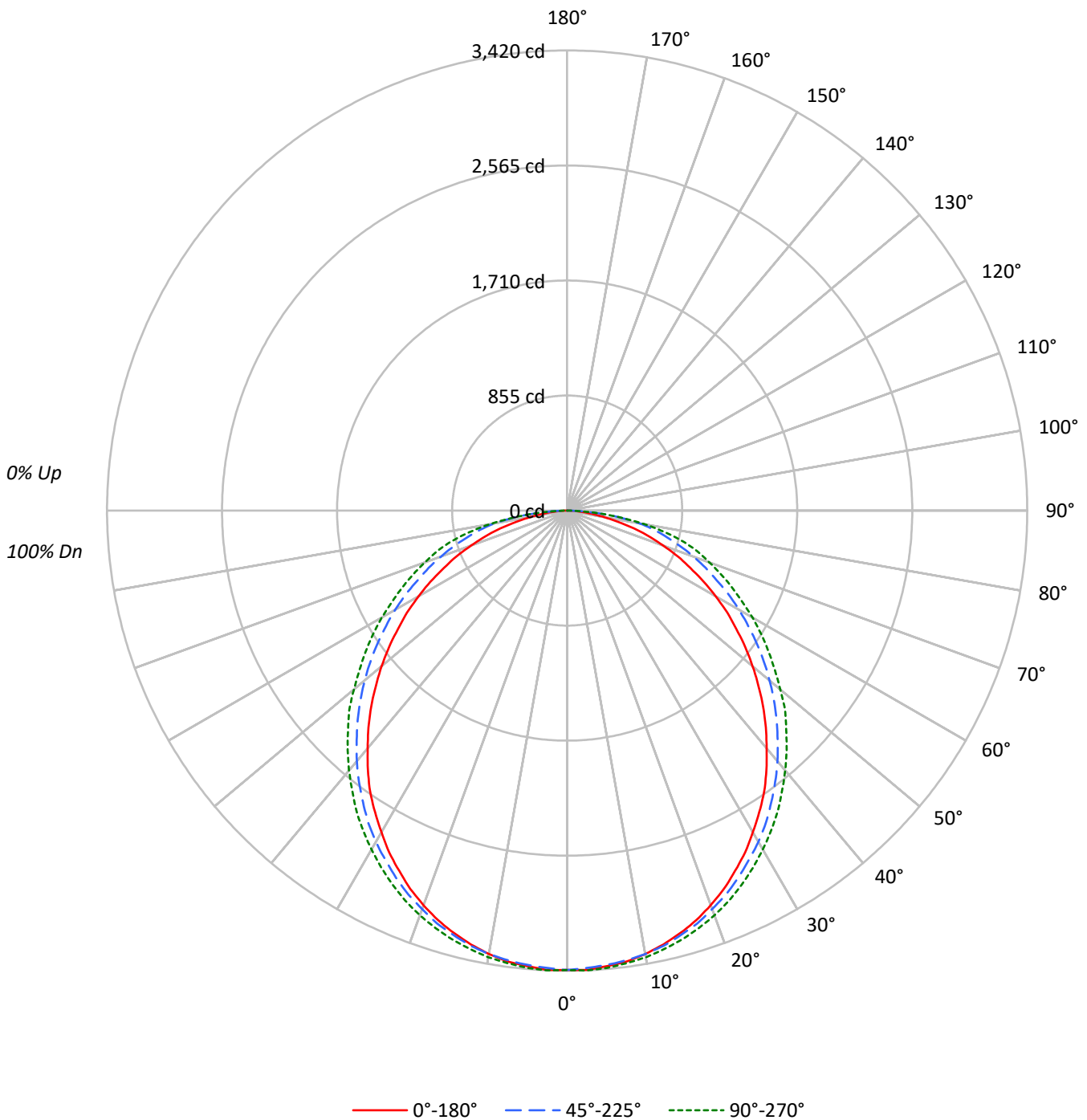
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4594	4594	4594
5°	4591	4578	4607
10°	4572	4572	4606
15°	4528	4550	4597
20°	4469	4513	4584
25°	4386	4468	4556
30°	4288	4417	4518
35°	4193	4346	4482
40°	4050	4273	4430
45°	3918	4188	4382
50°	3767	4110	4330
55°	3599	4034	4287
60°	3431	3971	4278
65°	3214	3902	4305
70°	2975	3923	4421
75°	2664	3996	4670
80°	2152	4234	4568
85°	1621	3717	3622



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.2	3.3
10°-20°	923.6	9.5
20°-30°	1388.4	14.3
30°-40°	1653.8	17.0
40°-50°	1692.6	17.4
50°-60°	1523.8	15.7
60°-70°	1196.7	12.3
70°-80°	776.7	8.0
80°-90°	240.2	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°	2635.2	27.1
0°-40°	4289.0	44.1
0°-60°	7505.4	77.2
0°-90°	9719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3414	3414	3414	3414	3414	
5°	3399	3405	3390	3408	3411	323
15°	3251	3260	3266	3294	3300	917
25°	2954	2979	3010	3059	3069	1361
35°	2553	2584	2646	2710	2729	1593
45°	2059	2108	2201	2284	2303	1587
55°	1534	1602	1720	1809	1828	1375
65°	1010	1087	1226	1328	1352	1005
75°	512	611	769	874	898	542
85°	105	194	241	235	235	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3414.3	3414.3	3414.3	3414.3	3414.3
2.5°	3417.4	3417.4	3402.0	3417.4	3420.5
5°	3398.9	3405.1	3389.7	3408.2	3411.3
7.5°	3380.4	3380.4	3371.1	3389.7	3392.7
10°	3346.4	3349.5	3346.4	3368.0	3371.1
12.5°	3303.2	3309.4	3312.5	3334.1	3337.2
15°	3250.7	3260.0	3266.2	3294.0	3300.1
17.5°	3192.1	3201.3	3216.8	3247.6	3253.8
20°	3121.1	3133.4	3151.9	3192.1	3201.3
22.5°	3043.9	3056.2	3087.1	3124.2	3139.6
25°	2954.4	2979.1	3009.9	3059.3	3068.6
27.5°	2864.8	2886.5	2926.6	2979.1	2991.4
30°	2759.9	2793.8	2843.2	2895.7	2908.1
32.5°	2658.0	2692.0	2750.6	2806.2	2821.6
35°	2553.0	2583.9	2645.7	2710.5	2729.0
37.5°	2432.6	2472.8	2540.7	2605.5	2624.0
40°	2306.1	2355.5	2432.6	2500.6	2522.2
42.5°	2185.7	2238.2	2315.3	2389.4	2414.1
45°	2059.1	2108.5	2201.1	2284.5	2303.0
47.5°	1929.4	1985.0	2083.8	2167.2	2198.0
50°	1799.8	1858.4	1963.4	2049.8	2068.4
52.5°	1670.1	1731.9	1843.0	1935.6	1944.9
55°	1534.3	1602.2	1719.5	1809.0	1827.6
57.5°	1410.8	1469.5	1596.0	1688.7	1710.3
60°	1275.0	1339.8	1475.6	1562.1	1589.9
62.5°	1145.3	1213.2	1355.2	1441.7	1466.4
65°	1009.5	1086.7	1225.6	1327.5	1352.2
67.5°	892.2	966.3	1114.4	1213.2	1237.9
70°	756.3	839.7	997.1	1099.0	1123.7
72.5°	639.0	725.5	882.9	981.7	1018.7
75°	512.5	611.2	768.7	873.7	898.4
77.5°	389.0	503.2	663.7	744.0	744.0
80°	277.8	398.2	546.4	583.5	589.6
82.5°	182.1	299.5	404.4	401.3	401.3
85°	105.0	194.5	240.8	234.6	234.6
87.5°	40.1	80.3	86.4	86.4	83.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)