

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: P389545

Luminaire Tested: **24CZ2-110VHE-S-UNV-L935-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: P389545
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-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9736.9 lumens
Efficiency: N/A
Efficacy: 125.8 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

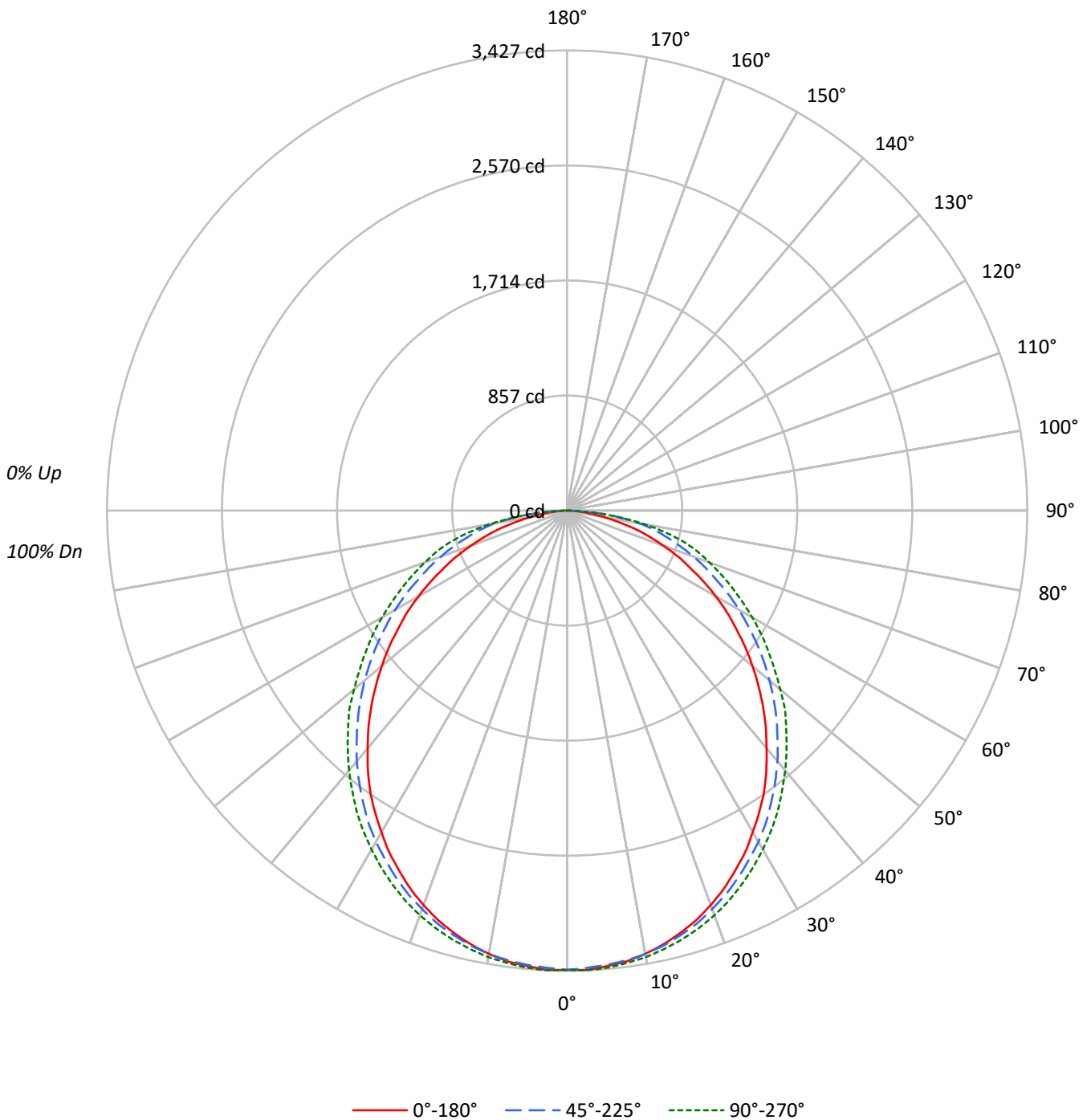
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4602	4602	4602
5°	4599	4587	4616
10°	4580	4580	4614
15°	4536	4558	4605
20°	4477	4521	4592
25°	4394	4477	4564
30°	4296	4426	4526
35°	4201	4354	4491
40°	4058	4281	4438
45°	3925	4196	4390
50°	3774	4117	4338
55°	3606	4041	4295
60°	3437	3978	4286
65°	3220	3909	4313
70°	2981	3930	4429
75°	2669	4003	4679
80°	2157	4241	4577
85°	1624	3724	3629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.8	3.3
10°-20°	925.3	9.5
20°-30°	1391.0	14.3
30°-40°	1656.8	17.0
40°-50°	1695.7	17.4
50°-60°	1526.6	15.7
60°-70°	1198.9	12.3
70°-80°	778.1	8.0
80°-90°	240.7	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°	2640.1	27.1
0°-40°	4296.9	44.1
0°-60°	7519.3	77.2
0°-90°	9736.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9736.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3421	3421	3421	3421	3421	
5°	3405	3411	3396	3414	3418	324
15°	3257	3266	3272	3300	3306	918
25°	2960	2985	3016	3065	3074	1363
35°	2558	2589	2650	2716	2734	1596
45°	2063	2112	2205	2289	2307	1590
55°	1537	1605	1723	1812	1831	1378
65°	1011	1089	1228	1330	1355	1007
75°	513	612	770	875	900	543
85°	105	195	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°	3420.6	3420.6	3420.6	3420.6	3420.6
2.5°	3423.7	3423.7	3408.3	3423.7	3426.8
5°	3405.2	3411.4	3395.9	3414.5	3417.5
7.5°	3386.6	3386.6	3377.3	3395.9	3399.0
10°	3352.6	3355.7	3352.6	3374.2	3377.3
12.5°	3309.3	3315.5	3318.6	3340.2	3343.3
15°	3256.7	3266.0	3272.2	3300.0	3306.2
17.5°	3198.0	3207.2	3222.7	3253.6	3259.8
20°	3126.8	3139.2	3157.7	3198.0	3207.2
22.5°	3049.5	3061.9	3092.8	3129.9	3145.4
25°	2959.8	2984.6	3015.5	3065.0	3074.2
27.5°	2870.1	2891.8	2932.0	2984.6	2996.9
30°	2765.0	2799.0	2848.5	2901.0	2913.4
32.5°	2662.9	2696.9	2755.7	2811.4	2826.8
35°	2557.7	2588.7	2650.5	2715.5	2734.0
37.5°	2437.1	2477.3	2545.4	2610.3	2628.9
40°	2310.3	2359.8	2437.1	2505.2	2526.8
42.5°	2189.7	2242.3	2319.6	2393.8	2418.6
45°	2062.9	2112.4	2205.2	2288.7	2307.2
47.5°	1933.0	1988.7	2087.6	2171.1	2202.1
50°	1803.1	1861.9	1967.0	2053.6	2072.2
52.5°	1673.2	1735.1	1846.4	1939.2	1948.5
55°	1537.1	1605.2	1722.7	1812.4	1830.9
57.5°	1413.4	1472.2	1599.0	1691.8	1713.4
60°	1277.3	1342.3	1478.4	1565.0	1592.8
62.5°	1147.4	1215.5	1357.7	1444.3	1469.1
65°	1011.3	1088.7	1227.8	1329.9	1354.6
67.5°	893.8	968.0	1116.5	1215.5	1240.2
70°	757.7	841.2	999.0	1101.0	1125.8
72.5°	640.2	726.8	884.5	983.5	1020.6
75°	513.4	612.4	770.1	875.3	900.0
77.5°	389.7	504.1	665.0	745.4	745.4
80°	278.4	399.0	547.4	584.5	590.7
82.5°	182.5	300.0	405.2	402.1	402.1
85°	105.2	194.8	241.2	235.1	235.1
87.5°	40.2	80.4	86.6	86.6	83.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)