

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: P388633

Luminaire Tested: **24CZ2-120VHE-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: P388633
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: 24CZ2-120VHE-UNV-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10196.1 lumens
Efficiency: N/A
Efficacy: 122.0 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

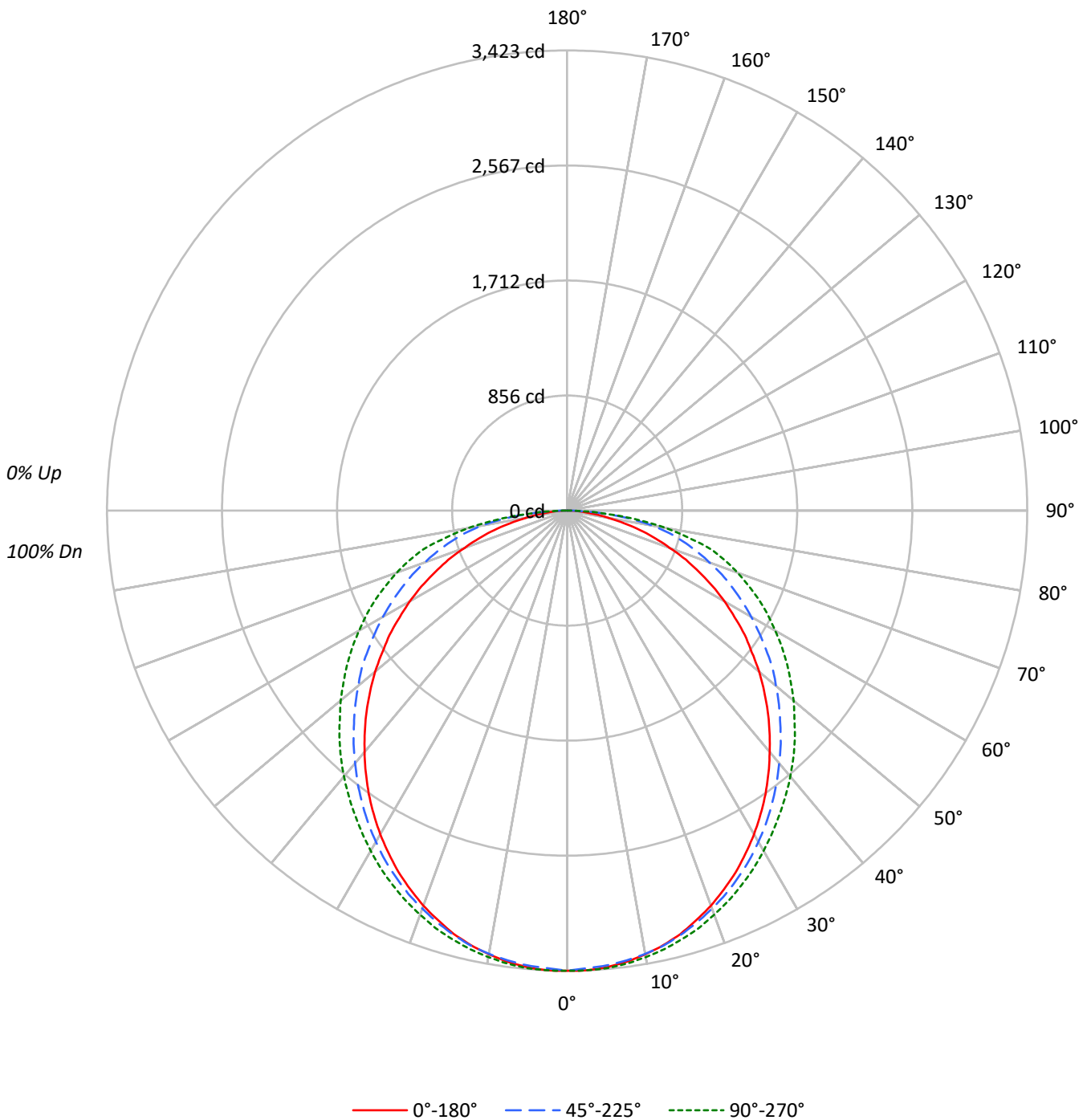
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4606	4606	4606
5°	4605	4587	4614
10°	4579	4575	4607
15°	4541	4550	4598
20°	4478	4512	4580
25°	4405	4471	4562
30°	4319	4420	4541
35°	4226	4365	4527
40°	4118	4309	4536
45°	4015	4267	4558
50°	3903	4245	4602
55°	3784	4239	4686
60°	3635	4258	4807
65°	3445	4323	5016
70°	3199	4431	5301
75°	2919	4653	5749
80°	2400	5009	5748
85°	1839	4624	4939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.8	3.2
10°-20°	924.3	9.1
20°-30°	1390.9	13.6
30°-40°	1666.9	16.3
40°-50°	1737.1	17.0
50°-60°	1616.2	15.9
60°-70°	1331.1	13.1
70°-80°	906.6	8.9
80°-90°	299.3	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°	2639.0	25.9
0°-40°	4305.9	42.2
0°-60°	7659.2	75.1
0°-90°	10196.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10196.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3423	3423	3423	3423	3423	
5°	3410	3410	3396	3413	3416	324
15°	3260	3263	3267	3297	3301	918
25°	2967	2981	3012	3063	3073	1366
35°	2573	2603	2658	2729	2756	1608
45°	2110	2154	2242	2355	2396	1627
55°	1613	1667	1807	1950	1998	1438
65°	1082	1174	1358	1518	1576	1074
75°	562	687	895	1055	1106	592
85°	119	231	300	320	320	148
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3423.3	3423.3	3423.3	3423.3	3423.3
2.5°	3423.3	3423.3	3406.3	3423.3	3423.3
5°	3409.7	3409.7	3396.1	3413.1	3416.5
7.5°	3385.9	3389.3	3375.7	3396.1	3399.5
10°	3351.8	3355.2	3348.4	3368.9	3372.3
12.5°	3311.0	3314.4	3314.4	3338.2	3341.6
15°	3260.0	3263.4	3266.8	3297.4	3300.8
17.5°	3195.3	3205.5	3212.3	3249.8	3256.6
20°	3127.3	3137.5	3151.1	3191.9	3198.7
22.5°	3049.0	3062.6	3086.4	3130.7	3140.9
25°	2967.3	2980.9	3011.6	3062.6	3072.8
27.5°	2875.4	2895.9	2933.3	2987.7	3001.3
30°	2780.2	2800.6	2844.8	2902.7	2923.1
32.5°	2678.1	2705.3	2756.3	2821.0	2841.4
35°	2572.6	2603.2	2657.7	2729.1	2756.3
37.5°	2460.3	2494.3	2559.0	2637.2	2671.3
40°	2344.6	2385.4	2453.5	2545.4	2582.8
42.5°	2228.9	2266.3	2351.4	2450.1	2490.9
45°	2109.8	2154.0	2242.5	2354.8	2395.6
47.5°	1987.3	2031.5	2137.0	2256.1	2293.5
50°	1864.8	1909.0	2028.1	2154.0	2198.3
52.5°	1732.1	1789.9	1926.0	2051.9	2096.2
55°	1613.0	1667.4	1806.9	1949.9	1997.5
57.5°	1476.9	1541.5	1694.6	1844.4	1895.4
60°	1350.9	1419.0	1582.3	1735.5	1786.5
62.5°	1221.6	1296.5	1470.0	1626.6	1684.4
65°	1082.1	1174.0	1357.8	1517.7	1575.5
67.5°	956.2	1051.5	1245.5	1408.8	1459.8
70°	813.3	929.0	1126.4	1289.7	1347.5
72.5°	690.8	806.5	1014.1	1174.0	1231.8
75°	561.5	687.4	895.0	1054.9	1105.9
77.5°	432.2	571.7	779.3	901.8	918.8
80°	309.7	456.0	646.5	718.0	741.8
82.5°	217.8	350.5	476.4	524.0	537.7
85°	119.1	231.4	299.5	319.9	319.9
87.5°	51.0	98.7	119.1	122.5	125.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)