

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: P389570

Luminaire Tested: **24CZ2-120VHE-S-UNV-L935-CD2-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: P389570
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: 24CZ2-120VHE-S-UNV-L935-CD2-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: 10848.0 lumens
Efficiency: N/A
Efficacy: 129.8 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

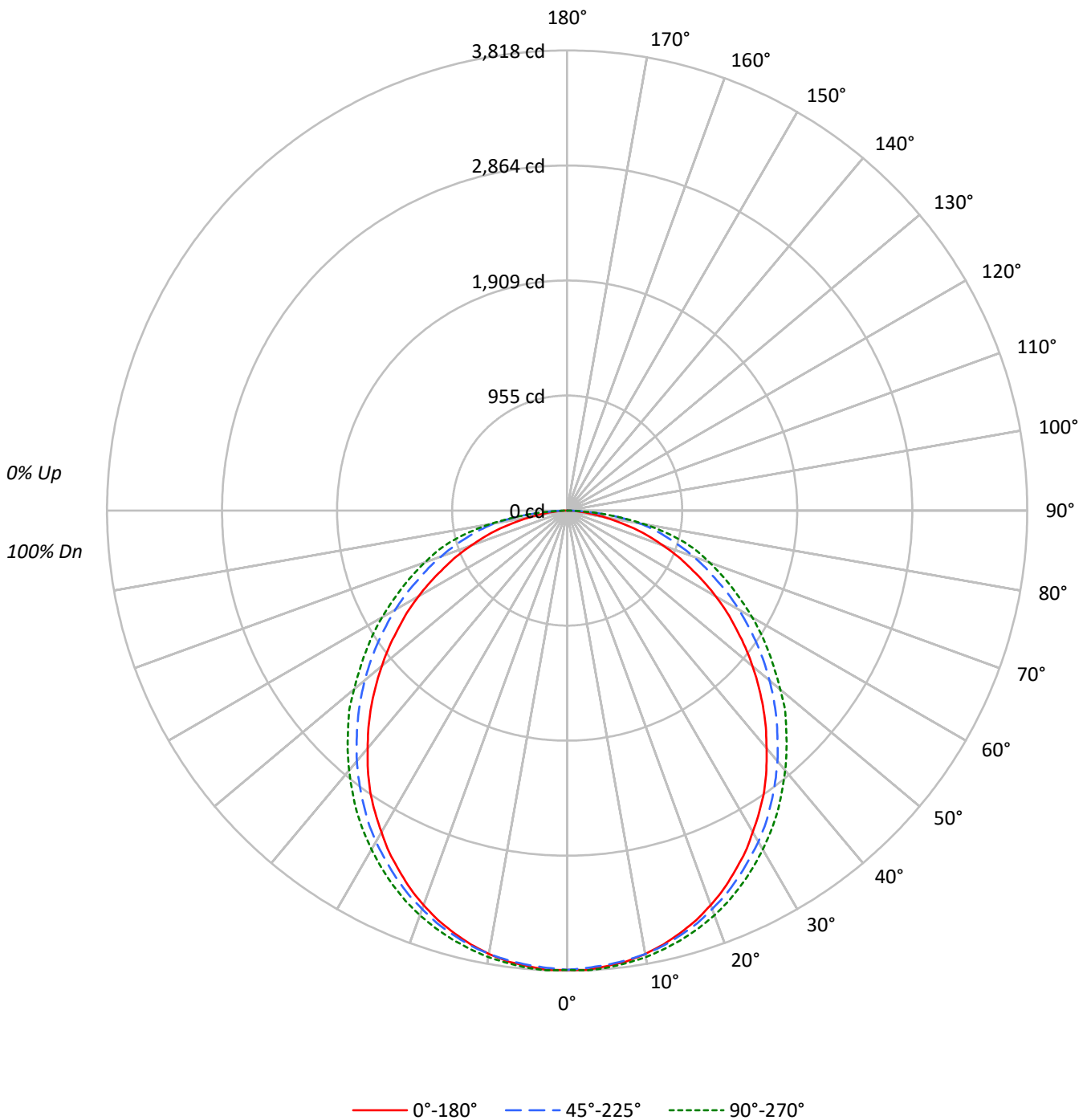
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5128	5128	5128
5°	5124	5110	5143
10°	5103	5103	5141
15°	5054	5078	5131
20°	4988	5037	5116
25°	4896	4988	5085
30°	4786	4930	5043
35°	4681	4850	5003
40°	4521	4769	4945
45°	4373	4675	4891
50°	4205	4587	4832
55°	4017	4502	4785
60°	3830	4432	4775
65°	3587	4355	4805
70°	3321	4378	4934
75°	2974	4460	5213
80°	2403	4726	5099
85°	1809	4150	4043



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.8	3.3
10°-20°	1030.9	9.5
20°-30°	1549.7	14.3
30°-40°	1845.9	17.0
40°-50°	1889.2	17.4
50°-60°	1700.8	15.7
60°-70°	1335.7	12.3
70°-80°	866.9	8.0
80°-90°	268.1	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°	2941.4	27.1
0°-40°	4787.3	44.1
0°-60°	8377.3	77.2
0°-90°	10848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3811	3811	3811	3811	3811	
5°	3794	3801	3783	3804	3808	360
15°	3628	3639	3646	3677	3684	1023
25°	3298	3325	3360	3415	3425	1519
35°	2850	2884	2953	3025	3046	1778
45°	2298	2353	2457	2550	2570	1772
55°	1712	1788	1919	2019	2040	1535
65°	1127	1213	1368	1482	1509	1122
75°	572	682	858	975	1003	605
85°	117	217	269	262	262	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3811.0	3811.0	3811.0	3811.0	3811.0
2.5°	3814.4	3814.4	3797.2	3814.4	3817.9
5°	3793.7	3800.6	3783.4	3804.1	3807.5
7.5°	3773.1	3773.1	3762.7	3783.4	3786.9
10°	3735.2	3738.6	3735.2	3759.3	3762.7
12.5°	3686.9	3693.8	3697.3	3721.4	3724.8
15°	3628.3	3638.7	3645.6	3676.6	3683.5
17.5°	3562.9	3573.2	3590.4	3624.9	3631.8
20°	3483.6	3497.4	3518.1	3562.9	3573.2
22.5°	3397.5	3411.3	3445.7	3487.1	3504.3
25°	3297.6	3325.1	3359.6	3414.7	3425.1
27.5°	3197.6	3221.8	3266.5	3325.1	3338.9
30°	3080.5	3118.4	3173.5	3232.1	3245.9
32.5°	2966.8	3004.7	3070.1	3132.2	3149.4
35°	2849.6	2884.1	2953.0	3025.3	3046.0
37.5°	2715.2	2760.0	2835.8	2908.2	2928.9
40°	2574.0	2629.1	2715.2	2791.0	2815.2
42.5°	2439.6	2498.2	2584.3	2667.0	2694.6
45°	2298.3	2353.4	2456.8	2549.8	2570.5
47.5°	2153.6	2215.6	2325.9	2418.9	2453.4
50°	2008.9	2074.3	2191.5	2288.0	2308.6
52.5°	1864.1	1933.1	2057.1	2160.5	2170.8
55°	1712.5	1788.3	1919.3	2019.2	2039.9
57.5°	1574.7	1640.2	1781.4	1884.8	1908.9
60°	1423.1	1495.4	1647.1	1743.5	1774.5
62.5°	1278.4	1354.2	1512.7	1609.2	1636.7
65°	1126.8	1212.9	1368.0	1481.7	1509.2
67.5°	995.8	1078.5	1243.9	1354.2	1381.7
70°	844.2	937.2	1113.0	1226.7	1254.2
72.5°	713.3	809.7	985.5	1095.7	1137.1
75°	572.0	682.3	858.0	975.1	1002.7
77.5°	434.2	561.7	740.8	830.4	830.4
80°	310.1	444.5	609.9	651.2	658.1
82.5°	203.3	334.2	451.4	447.9	447.9
85°	117.2	217.1	268.8	261.9	261.9
87.5°	44.8	89.6	96.5	96.5	93.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)