

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: P388634

Luminaire Tested: **24CZ2-120VHE-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: P388634
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-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: 10324.2 lumens
Efficiency: N/A
Efficacy: 123.5 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

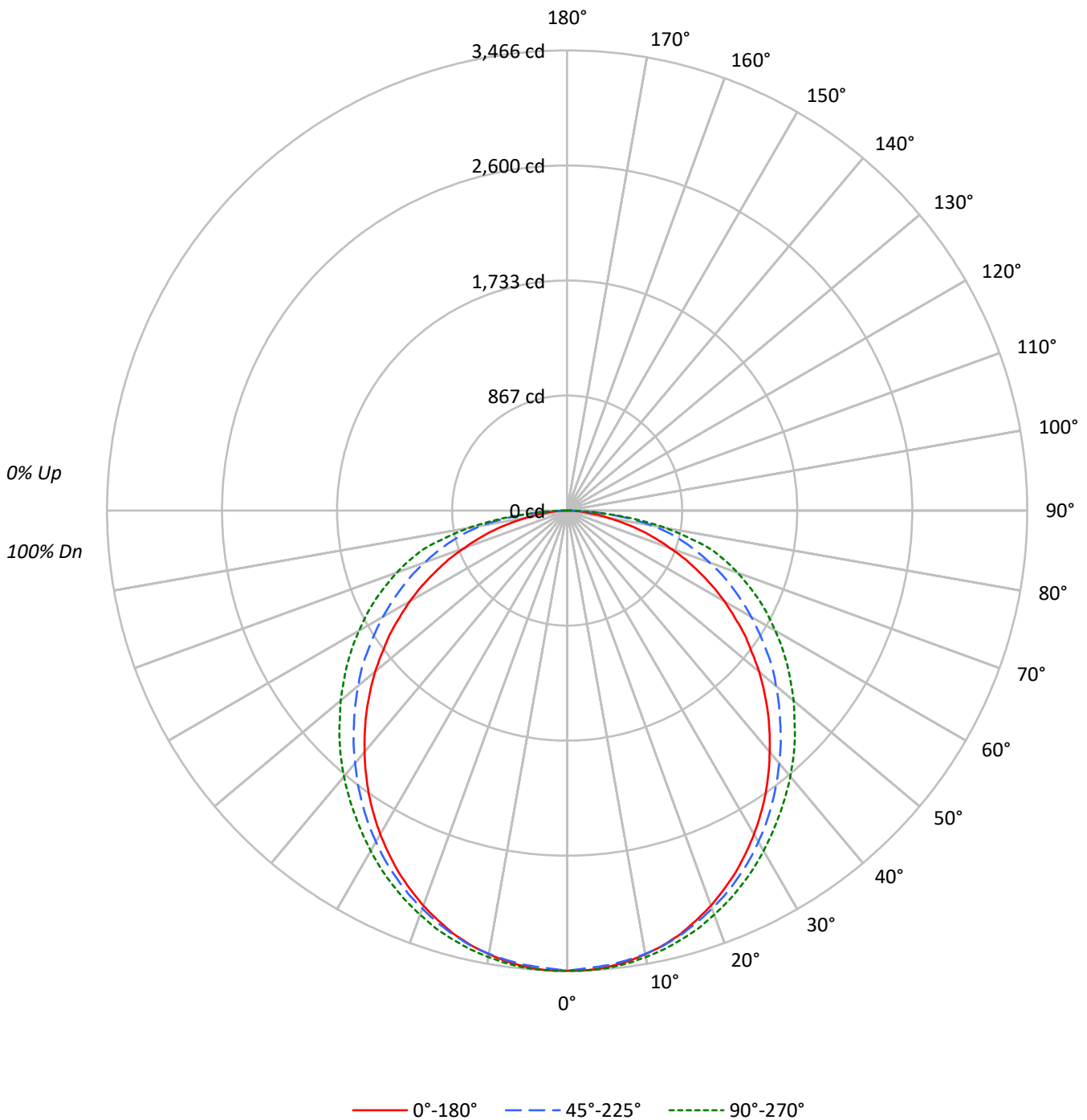
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4664	4664	4664
5°	4663	4644	4672
10°	4637	4632	4665
15°	4598	4608	4656
20°	4534	4569	4638
25°	4461	4527	4619
30°	4374	4475	4598
35°	4279	4420	4584
40°	4170	4363	4593
45°	4065	4321	4616
50°	3952	4299	4659
55°	3831	4292	4745
60°	3681	4311	4868
65°	3488	4377	5079
70°	3240	4487	5368
75°	2955	4711	5821
80°	2430	5073	5820
85°	1862	4681	5000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.8	3.2
10°-20°	935.9	9.1
20°-30°	1408.4	13.6
30°-40°	1687.8	16.3
40°-50°	1758.9	17.0
50°-60°	1636.5	15.9
60°-70°	1347.8	13.1
70°-80°	917.9	8.9
80°-90°	303.0	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°	2672.2	25.9
0°-40°	4360.0	42.2
0°-60°	7755.4	75.1
0°-90°	10324.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10324.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3466	3466	3466	3466	3466	
5°	3452	3452	3439	3456	3459	328
15°	3301	3304	3308	3339	3342	930
25°	3005	3018	3049	3101	3111	1383
35°	2605	2636	2691	2763	2791	1628
45°	2136	2181	2271	2384	2426	1648
55°	1633	1688	1830	1974	2023	1456
65°	1096	1189	1375	1537	1595	1088
75°	568	696	906	1068	1120	599
85°	121	234	303	324	324	149
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3466.3	3466.3	3466.3	3466.3	3466.3
2.5°	3466.3	3466.3	3449.1	3466.3	3466.3
5°	3452.5	3452.5	3438.7	3456.0	3459.4
7.5°	3428.4	3431.9	3418.1	3438.7	3442.2
10°	3394.0	3397.4	3390.5	3411.2	3414.6
12.5°	3352.6	3356.1	3356.1	3380.2	3383.6
15°	3300.9	3304.4	3307.8	3338.8	3342.3
17.5°	3235.5	3245.8	3252.7	3290.6	3297.5
20°	3166.5	3176.9	3190.7	3232.0	3238.9
22.5°	3087.3	3101.1	3125.2	3170.0	3180.3
25°	3004.6	3018.4	3049.4	3101.1	3111.4
27.5°	2911.6	2932.2	2970.1	3025.3	3039.1
30°	2815.1	2835.8	2880.6	2939.1	2959.8
32.5°	2711.7	2739.3	2791.0	2856.4	2877.1
35°	2604.9	2635.9	2691.0	2763.4	2791.0
37.5°	2491.2	2525.7	2591.1	2670.4	2704.8
40°	2374.0	2415.4	2484.3	2577.3	2615.2
42.5°	2256.9	2294.8	2380.9	2480.9	2522.2
45°	2136.3	2181.1	2270.7	2384.4	2425.7
47.5°	2012.3	2057.0	2163.9	2284.5	2322.4
50°	1888.2	1933.0	2053.6	2181.1	2225.9
52.5°	1753.8	1812.4	1950.2	2077.7	2122.5
55°	1633.2	1688.4	1829.6	1974.4	2022.6
57.5°	1495.4	1560.9	1715.9	1867.5	1919.2
60°	1367.9	1436.8	1602.2	1757.3	1809.0
62.5°	1237.0	1312.8	1488.5	1647.0	1705.6
65°	1095.7	1188.7	1374.8	1536.8	1595.3
67.5°	968.2	1064.7	1261.1	1426.5	1478.2
70°	823.5	940.7	1140.5	1305.9	1364.5
72.5°	699.5	816.6	1026.8	1188.7	1247.3
75°	568.5	696.0	906.2	1068.1	1119.8
77.5°	437.6	578.9	789.1	913.1	930.3
80°	313.6	461.7	654.7	727.0	751.1
82.5°	220.5	354.9	482.4	530.6	544.4
85°	120.6	234.3	303.2	323.9	323.9
87.5°	51.7	99.9	120.6	124.0	127.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)