

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: P391125

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L930-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: P391125
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-HRP-UNV-L930-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11630.7 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

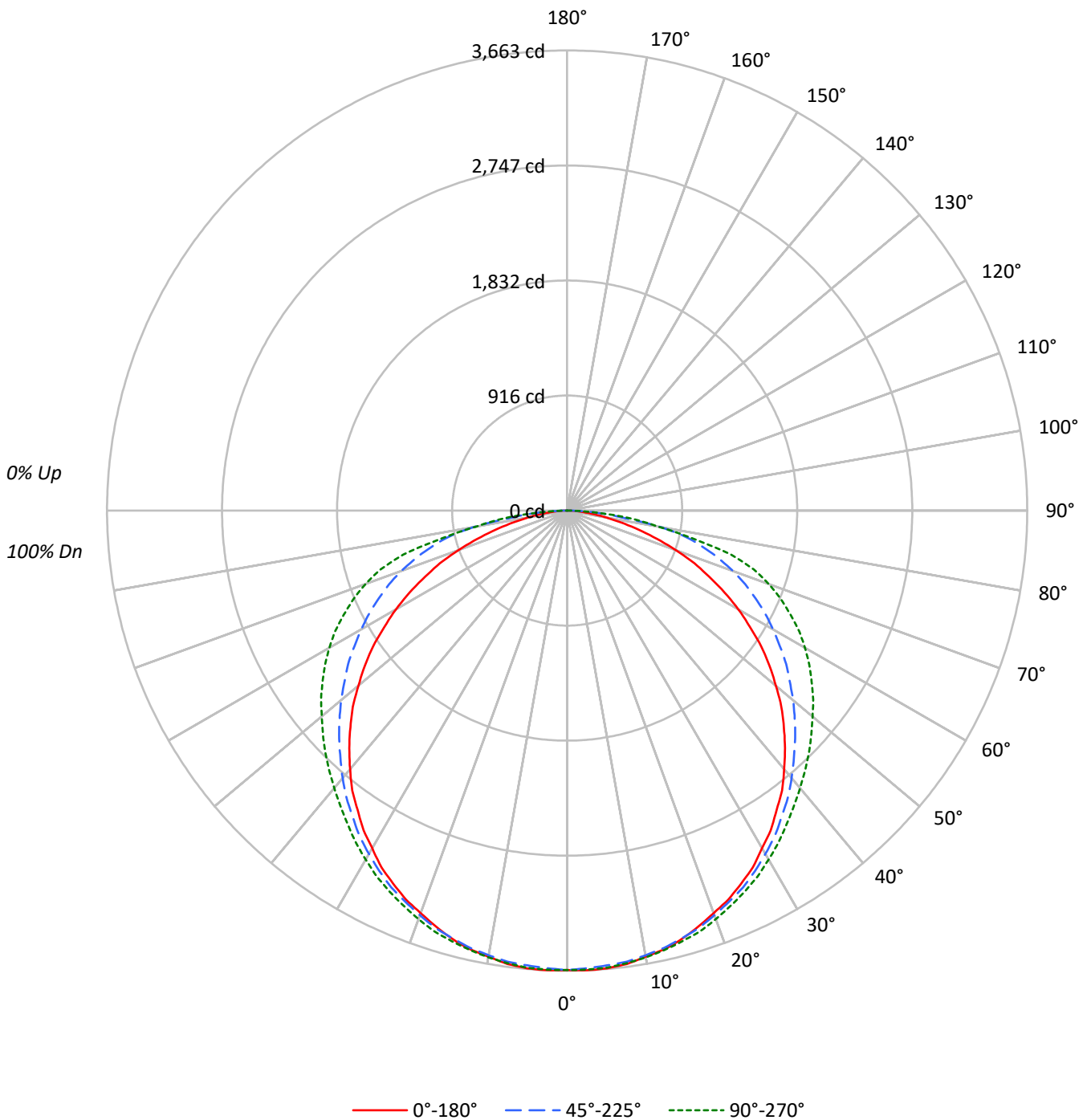
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4921	4921	4921
5°	4940	4909	4932
10°	4926	4910	4934
15°	4918	4910	4942
20°	4882	4907	4956
25°	4865	4916	4967
30°	4822	4903	4983
35°	4776	4890	5003
40°	4722	4884	5066
45°	4643	4885	5181
50°	4540	4915	5337
55°	4425	4993	5575
60°	4238	5092	5884
65°	3967	5271	6245
70°	3609	5515	6718
75°	3059	5818	7018
80°	2414	5855	5677
85°	1782	4452	4988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.9	3.0
10°-20°	998.5	8.6
20°-30°	1526.9	13.1
30°-40°	1866.7	16.0
40°-50°	1989.5	17.1
50°-60°	1902.2	16.4
60°-70°	1611.4	13.9
70°-80°	1083.0	9.3
80°-90°	305.5	2.6
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°	2872.4	24.7
0°-40°	4739.1	40.7
0°-60°	8630.8	74.2
0°-90°	11630.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11630.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3658	3658	3658	3658	3658	
5°	3658	3652	3634	3652	3652	347
15°	3531	3531	3525	3554	3548	995
25°	3277	3288	3311	3340	3346	1510
35°	2908	2931	2977	3034	3046	1821
45°	2440	2481	2567	2677	2723	1882
55°	1886	1956	2129	2296	2377	1680
65°	1246	1373	1656	1875	1961	1237
75°	588	802	1119	1310	1350	630
85°	115	236	288	312	323	143
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3657.5	3657.5	3657.5	3657.5	3657.5
2.5°	3663.3	3663.3	3646.0	3657.5	3657.5
5°	3657.5	3651.8	3634.4	3651.8	3651.8
7.5°	3640.2	3634.4	3622.9	3640.2	3634.4
10°	3605.6	3605.6	3594.1	3611.4	3611.4
12.5°	3576.8	3571.0	3565.2	3588.3	3582.5
15°	3530.6	3530.6	3524.8	3553.7	3547.9
17.5°	3472.9	3478.7	3484.5	3507.5	3513.3
20°	3409.5	3421.0	3426.8	3461.4	3461.4
22.5°	3351.8	3357.5	3369.1	3403.7	3403.7
25°	3276.8	3288.3	3311.4	3340.2	3346.0
27.5°	3201.8	3207.5	3236.4	3276.8	3282.5
30°	3103.7	3121.0	3155.6	3201.8	3207.5
32.5°	3017.2	3034.5	3074.9	3121.0	3132.5
35°	2907.6	2930.6	2976.8	3034.5	3046.0
37.5°	2809.5	2826.8	2884.5	2947.9	2965.2
40°	2688.3	2723.0	2780.6	2855.6	2884.5
42.5°	2567.2	2601.8	2671.0	2769.1	2803.7
45°	2440.3	2480.7	2567.2	2676.8	2723.0
47.5°	2313.4	2359.5	2457.6	2584.5	2636.4
50°	2169.1	2226.8	2348.0	2492.2	2549.9
52.5°	2030.7	2099.9	2232.6	2394.1	2469.1
55°	1886.5	1955.7	2128.7	2296.0	2376.8
57.5°	1724.9	1817.2	2007.6	2198.0	2284.5
60°	1574.9	1661.5	1892.2	2099.9	2186.4
62.5°	1413.4	1528.8	1776.8	1996.1	2082.6
65°	1246.1	1373.0	1655.7	1874.9	1961.4
67.5°	1096.1	1234.6	1534.5	1753.8	1840.3
70°	917.3	1090.3	1401.9	1621.1	1707.6
72.5°	750.0	940.3	1263.4	1476.9	1557.6
75°	588.4	801.9	1119.2	1309.6	1349.9
77.5°	438.4	663.4	969.2	1050.0	1021.1
80°	311.5	530.7	755.7	715.4	732.7
82.5°	201.9	403.8	467.3	530.7	548.1
85°	115.4	236.5	288.4	311.5	323.1
87.5°	51.9	86.5	115.4	115.4	109.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)