

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: P390982

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L930-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: P390982
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: 24CZ2-120VHE-HRP-UNV-L930-CD2-SWPD1-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: 8445.8 lumens
Efficiency: N/A
Efficacy: 101.0 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

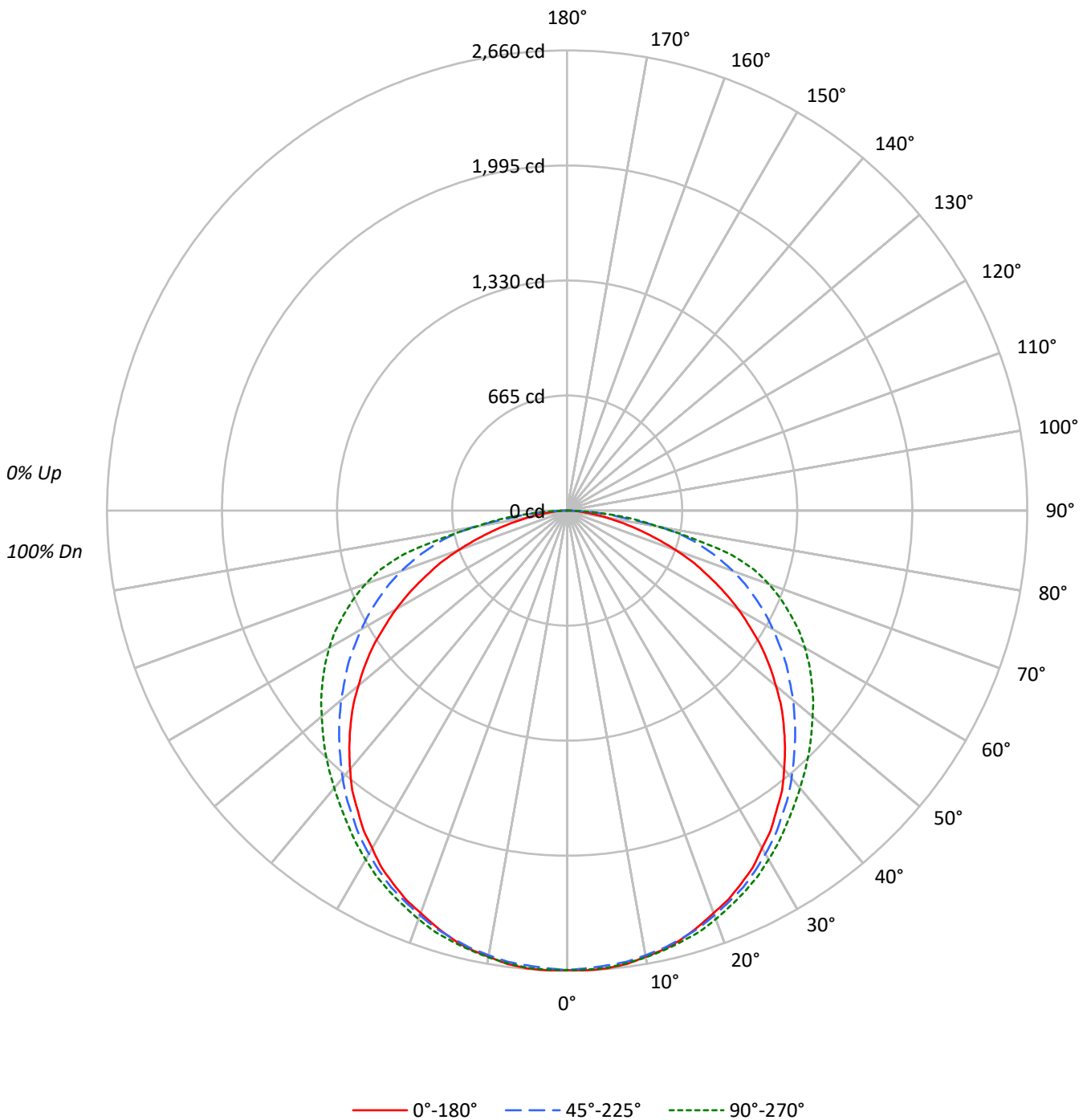
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3574	3574	3574
5°	3587	3565	3582
10°	3577	3566	3583
15°	3571	3565	3589
20°	3545	3563	3599
25°	3533	3570	3607
30°	3502	3560	3619
35°	3468	3551	3633
40°	3429	3547	3679
45°	3372	3547	3762
50°	3297	3569	3876
55°	3213	3626	4049
60°	3078	3698	4272
65°	2881	3828	4535
70°	2620	4005	4878
75°	2221	4225	5096
80°	1753	4252	4122
85°	1294	3234	3622



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.9	3.0
10°-20°	725.1	8.6
20°-30°	1108.8	13.1
30°-40°	1355.5	16.0
40°-50°	1444.7	17.1
50°-60°	1381.3	16.4
60°-70°	1170.2	13.9
70°-80°	786.4	9.3
80°-90°	221.8	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°	2085.8	24.7
0°-40°	3441.4	40.7
0°-60°	6267.4	74.2
0°-90°	8445.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8445.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2656	2656	2656	2656	2656	
5°	2656	2652	2639	2652	2652	252
15°	2564	2564	2560	2581	2576	723
25°	2380	2388	2405	2426	2430	1097
35°	2111	2128	2162	2204	2212	1323
45°	1772	1801	1864	1944	1977	1367
55°	1370	1420	1546	1667	1726	1220
65°	905	997	1202	1362	1424	898
75°	427	582	813	951	980	458
85°	84	172	210	226	235	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2656.0	2656.0	2656.0	2656.0	2656.0
2.5°	2660.2	2660.2	2647.6	2656.0	2656.0
5°	2656.0	2651.8	2639.2	2651.8	2651.8
7.5°	2643.4	2639.2	2630.8	2643.4	2639.2
10°	2618.3	2618.3	2609.9	2622.4	2622.4
12.5°	2597.3	2593.1	2588.9	2605.7	2601.5
15°	2563.8	2563.8	2559.6	2580.6	2576.4
17.5°	2521.9	2526.1	2530.3	2547.0	2551.2
20°	2475.8	2484.2	2488.4	2513.5	2513.5
22.5°	2433.9	2438.1	2446.5	2471.6	2471.6
25°	2379.5	2387.9	2404.6	2425.6	2429.7
27.5°	2325.0	2329.2	2350.2	2379.5	2383.7
30°	2253.8	2266.4	2291.5	2325.0	2329.2
32.5°	2191.0	2203.5	2232.9	2266.4	2274.7
35°	2111.4	2128.1	2161.6	2203.5	2211.9
37.5°	2040.1	2052.7	2094.6	2140.7	2153.3
40°	1952.2	1977.3	2019.2	2073.7	2094.6
42.5°	1864.2	1889.3	1939.6	2010.8	2036.0
45°	1772.0	1801.4	1864.2	1943.8	1977.3
47.5°	1679.9	1713.4	1784.6	1876.8	1914.5
50°	1575.1	1617.0	1705.0	1809.7	1851.6
52.5°	1474.6	1524.9	1621.2	1738.5	1793.0
55°	1369.9	1420.1	1545.8	1667.3	1726.0
57.5°	1252.6	1319.6	1457.8	1596.1	1658.9
60°	1143.7	1206.5	1374.1	1524.9	1587.7
62.5°	1026.4	1110.1	1290.3	1449.5	1512.3
65°	904.9	997.0	1202.3	1361.5	1424.3
67.5°	796.0	896.5	1114.3	1273.5	1336.4
70°	666.1	791.8	1018.0	1177.2	1240.0
72.5°	544.6	682.8	917.4	1072.4	1131.1
75°	427.3	582.3	812.7	951.0	980.3
77.5°	318.4	481.8	703.8	762.4	741.5
80°	226.2	385.4	548.8	519.5	532.0
82.5°	146.6	293.2	339.3	385.4	398.0
85°	83.8	171.8	209.5	226.2	234.6
87.5°	37.7	62.8	83.8	83.8	79.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)