

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: P390983

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L930-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: P390983
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-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: 8551.9 lumens
Efficiency: N/A
Efficacy: 102.3 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

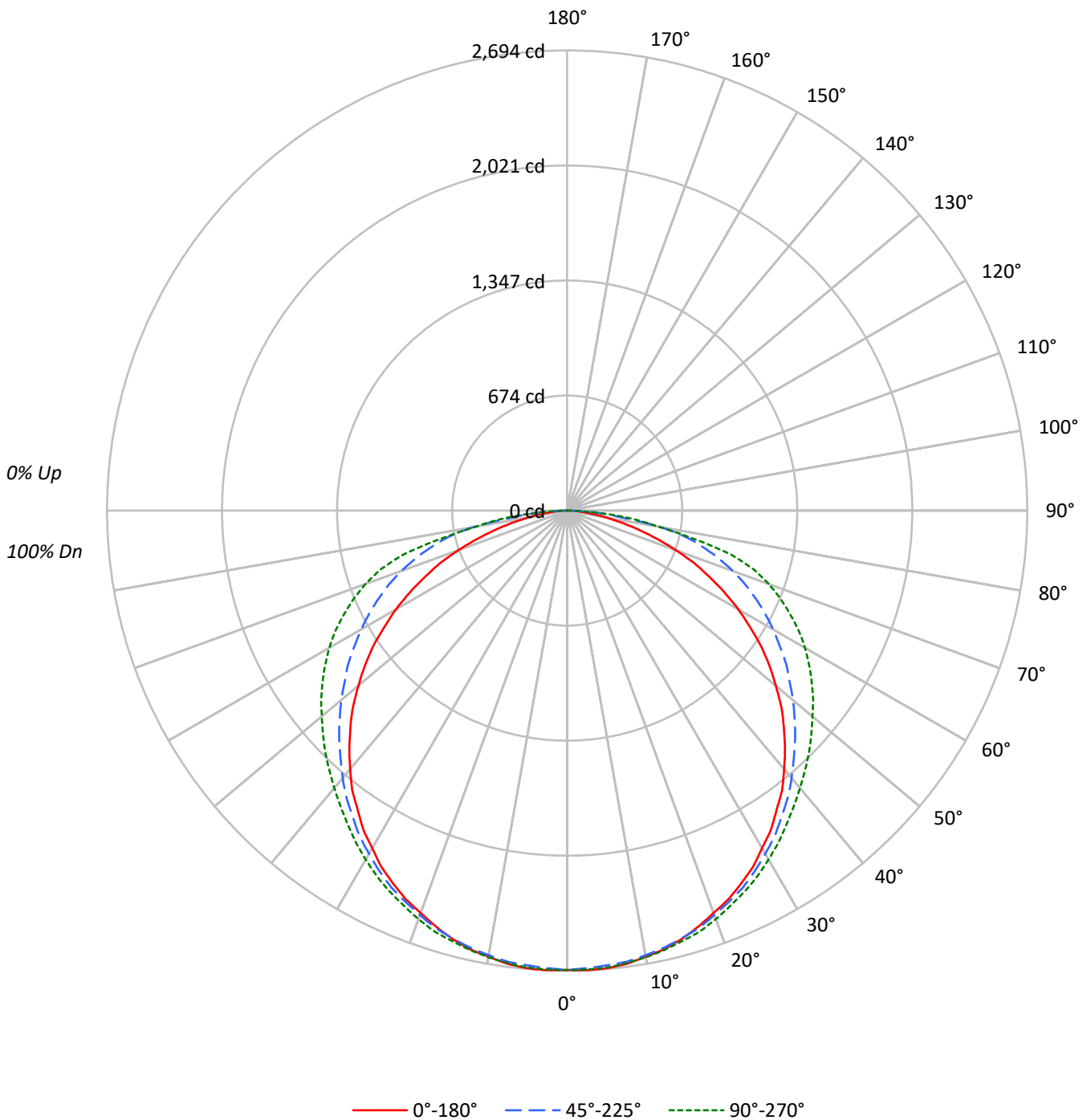
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3618	3618	3618
5°	3632	3609	3627
10°	3622	3611	3628
15°	3616	3610	3634
20°	3589	3608	3644
25°	3577	3615	3653
30°	3546	3605	3664
35°	3512	3595	3679
40°	3472	3591	3725
45°	3414	3592	3810
50°	3338	3614	3925
55°	3254	3672	4100
60°	3116	3744	4326
65°	2917	3876	4592
70°	2653	4055	4939
75°	2249	4278	5160
80°	1775	4306	4174
85°	1309	3274	3666



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.1	3.0
10°-20°	734.2	8.6
20°-30°	1122.7	13.1
30°-40°	1372.5	16.0
40°-50°	1462.8	17.1
50°-60°	1398.7	16.4
60°-70°	1184.9	13.9
70°-80°	796.3	9.3
80°-90°	224.6	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°	2112.1	24.7
0°-40°	3484.6	40.7
0°-60°	6346.1	74.2
0°-90°	8551.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8551.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2689	2689	2689	2689	2689	
5°	2689	2685	2672	2685	2685	256
15°	2596	2596	2592	2613	2609	732
25°	2409	2418	2435	2456	2460	1110
35°	2138	2155	2189	2231	2240	1339
45°	1794	1824	1888	1968	2002	1384
55°	1387	1438	1565	1688	1748	1235
65°	916	1010	1217	1379	1442	910
75°	433	590	823	963	993	463
85°	85	174	212	229	238	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2689.3	2689.3	2689.3	2689.3	2689.3
2.5°	2693.6	2693.6	2680.8	2689.3	2689.3
5°	2689.3	2685.1	2672.4	2685.1	2685.1
7.5°	2676.6	2672.4	2663.9	2676.6	2672.4
10°	2651.2	2651.2	2642.7	2655.4	2655.4
12.5°	2629.9	2625.7	2621.5	2638.4	2634.2
15°	2596.0	2596.0	2591.8	2613.0	2608.7
17.5°	2553.6	2557.8	2562.1	2579.0	2583.3
20°	2506.9	2515.4	2519.7	2545.1	2545.1
22.5°	2464.5	2468.8	2477.2	2502.7	2502.7
25°	2409.4	2417.9	2434.8	2456.0	2460.3
27.5°	2354.2	2358.5	2379.7	2409.4	2413.6
30°	2282.1	2294.8	2320.3	2354.2	2358.5
32.5°	2218.5	2231.2	2260.9	2294.8	2303.3
35°	2137.9	2154.9	2188.8	2231.2	2239.7
37.5°	2065.8	2078.5	2120.9	2167.6	2180.3
40°	1976.7	2002.1	2044.6	2099.7	2120.9
42.5°	1887.6	1913.1	1964.0	2036.1	2061.5
45°	1794.3	1824.0	1887.6	1968.2	2002.1
47.5°	1701.0	1734.9	1807.0	1900.3	1938.5
50°	1594.9	1637.4	1726.4	1832.5	1874.9
52.5°	1493.1	1544.0	1641.6	1760.4	1815.5
55°	1387.1	1438.0	1565.2	1688.3	1747.6
57.5°	1268.3	1336.2	1476.2	1616.1	1679.8
60°	1158.0	1221.7	1391.3	1544.0	1607.7
62.5°	1039.3	1124.1	1306.5	1467.7	1531.3
65°	916.2	1009.6	1217.4	1378.6	1442.2
67.5°	806.0	907.8	1128.3	1289.5	1353.1
70°	674.5	801.7	1030.8	1192.0	1255.6
72.5°	551.4	691.4	929.0	1085.9	1145.3
75°	432.7	589.6	822.9	962.9	992.6
77.5°	322.4	487.8	712.6	772.0	750.8
80°	229.1	390.2	555.7	526.0	538.7
82.5°	148.5	296.9	343.6	390.2	403.0
85°	84.8	173.9	212.1	229.1	237.5
87.5°	38.2	63.6	84.8	84.8	80.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)