

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: P390934

Luminaire Tested: **24CZ2-110VHE-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: P390934
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: 24CZ2-110VHE-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: 7676.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

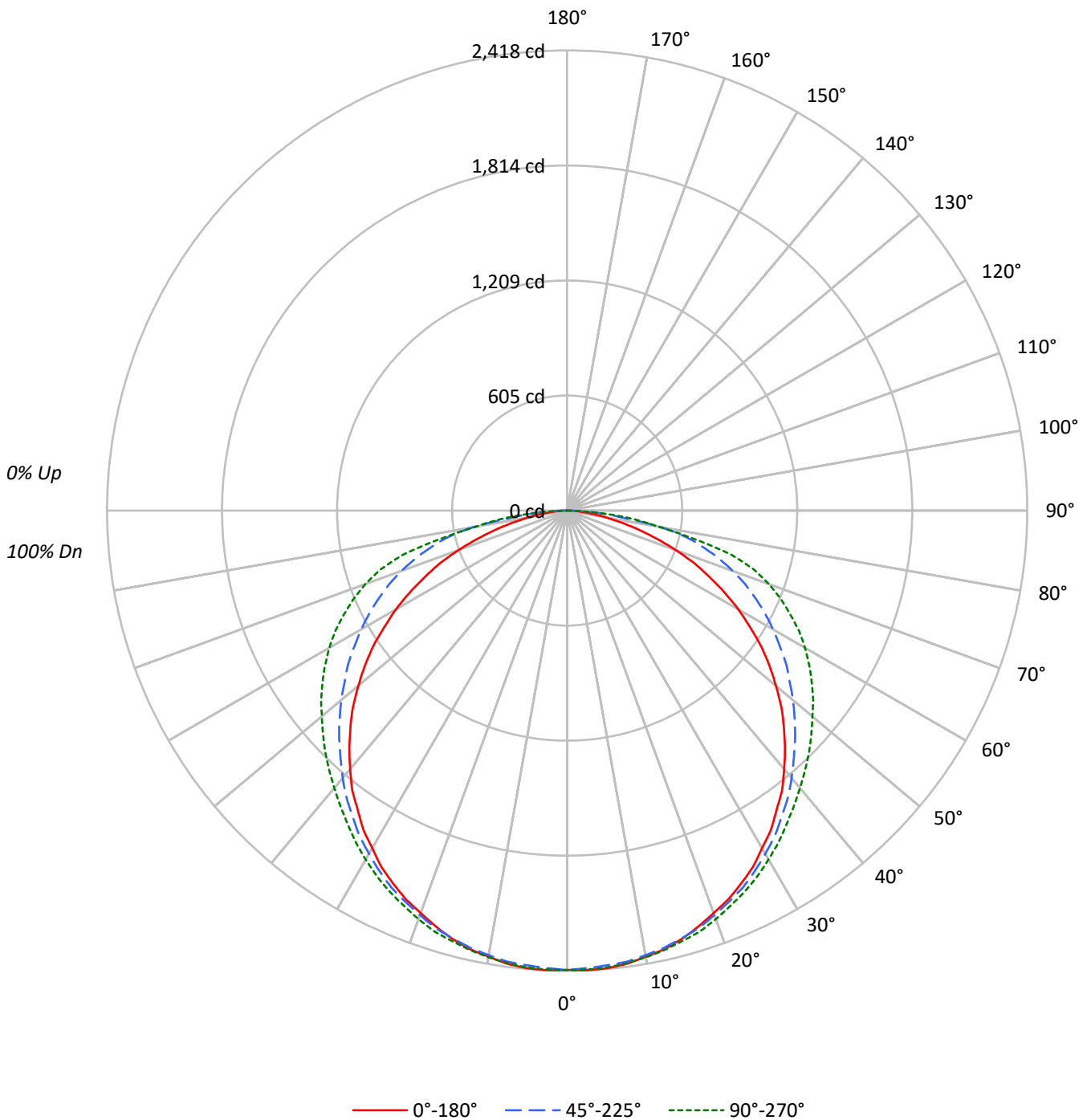
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3248	3248	3248
5°	3260	3240	3255
10°	3251	3241	3256
15°	3246	3240	3262
20°	3222	3238	3271
25°	3211	3244	3278
30°	3182	3236	3289
35°	3152	3227	3302
40°	3116	3223	3344
45°	3064	3224	3420
50°	2997	3244	3523
55°	2921	3296	3680
60°	2797	3360	3883
65°	2618	3479	4121
70°	2382	3640	4434
75°	2019	3840	4631
80°	1593	3865	3746
85°	1175	2939	3291



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.0	3.0
10°-20°	659.0	8.6
20°-30°	1007.8	13.1
30°-40°	1232.0	16.0
40°-50°	1313.0	17.1
50°-60°	1255.4	16.4
60°-70°	1063.5	13.9
70°-80°	714.8	9.3
80°-90°	201.6	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°	1895.7	24.7
0°-40°	3127.7	40.7
0°-60°	5696.1	74.2
0°-90°	7676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7676.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2414	2414	2414	2414	2414	
5°	2414	2410	2399	2410	2410	229
15°	2330	2330	2326	2345	2342	657
25°	2163	2170	2185	2204	2208	997
35°	1919	1934	1965	2003	2010	1202
45°	1610	1637	1694	1767	1797	1242
55°	1245	1291	1405	1515	1569	1109
65°	822	906	1093	1237	1294	816
75°	388	529	739	864	891	416
85°	76	156	190	206	213	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2413.9	2413.9	2413.9	2413.9	2413.9
2.5°	2417.7	2417.7	2406.3	2413.9	2413.9
5°	2413.9	2410.1	2398.7	2410.1	2410.1
7.5°	2402.5	2398.7	2391.0	2402.5	2398.7
10°	2379.6	2379.6	2372.0	2383.4	2383.4
12.5°	2360.6	2356.8	2353.0	2368.2	2364.4
15°	2330.1	2330.1	2326.3	2345.3	2341.5
17.5°	2292.0	2295.9	2299.7	2314.9	2318.7
20°	2250.2	2257.8	2261.6	2284.4	2284.4
22.5°	2212.1	2215.9	2223.5	2246.4	2246.4
25°	2162.6	2170.2	2185.4	2204.5	2208.3
27.5°	2113.1	2116.9	2135.9	2162.6	2166.4
30°	2048.4	2059.8	2082.6	2113.1	2116.9
32.5°	1991.3	2002.7	2029.3	2059.8	2067.4
35°	1918.9	1934.2	1964.6	2002.7	2010.3
37.5°	1854.2	1865.6	1903.7	1945.6	1957.0
40°	1774.2	1797.1	1835.2	1884.7	1903.7
42.5°	1694.3	1717.1	1762.8	1827.5	1850.4
45°	1610.5	1637.2	1694.3	1766.6	1797.1
47.5°	1526.8	1557.2	1621.9	1705.7	1740.0
50°	1431.6	1469.7	1549.6	1644.8	1682.9
52.5°	1340.2	1385.9	1473.5	1580.1	1629.6
55°	1245.0	1290.7	1404.9	1515.3	1568.6
57.5°	1138.4	1199.3	1325.0	1450.6	1507.7
60°	1039.4	1096.5	1248.8	1385.9	1443.0
62.5°	932.8	1009.0	1172.7	1317.4	1374.5
65°	822.4	906.2	1092.7	1237.4	1294.5
67.5°	723.4	814.8	1012.8	1157.4	1214.6
70°	605.4	719.6	925.2	1069.9	1127.0
72.5°	495.0	620.6	833.8	974.7	1028.0
75°	388.4	529.2	738.6	864.3	890.9
77.5°	289.4	437.8	639.6	692.9	673.9
80°	205.6	350.3	498.8	472.1	483.5
82.5°	133.3	266.5	308.4	350.3	361.7
85°	76.1	156.1	190.4	205.6	213.2
87.5°	34.3	57.1	76.1	76.1	72.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)