

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: P390991

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L950-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: P390991
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-L950-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9281.5 lumens
Efficiency: N/A
Efficacy: 111.0 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

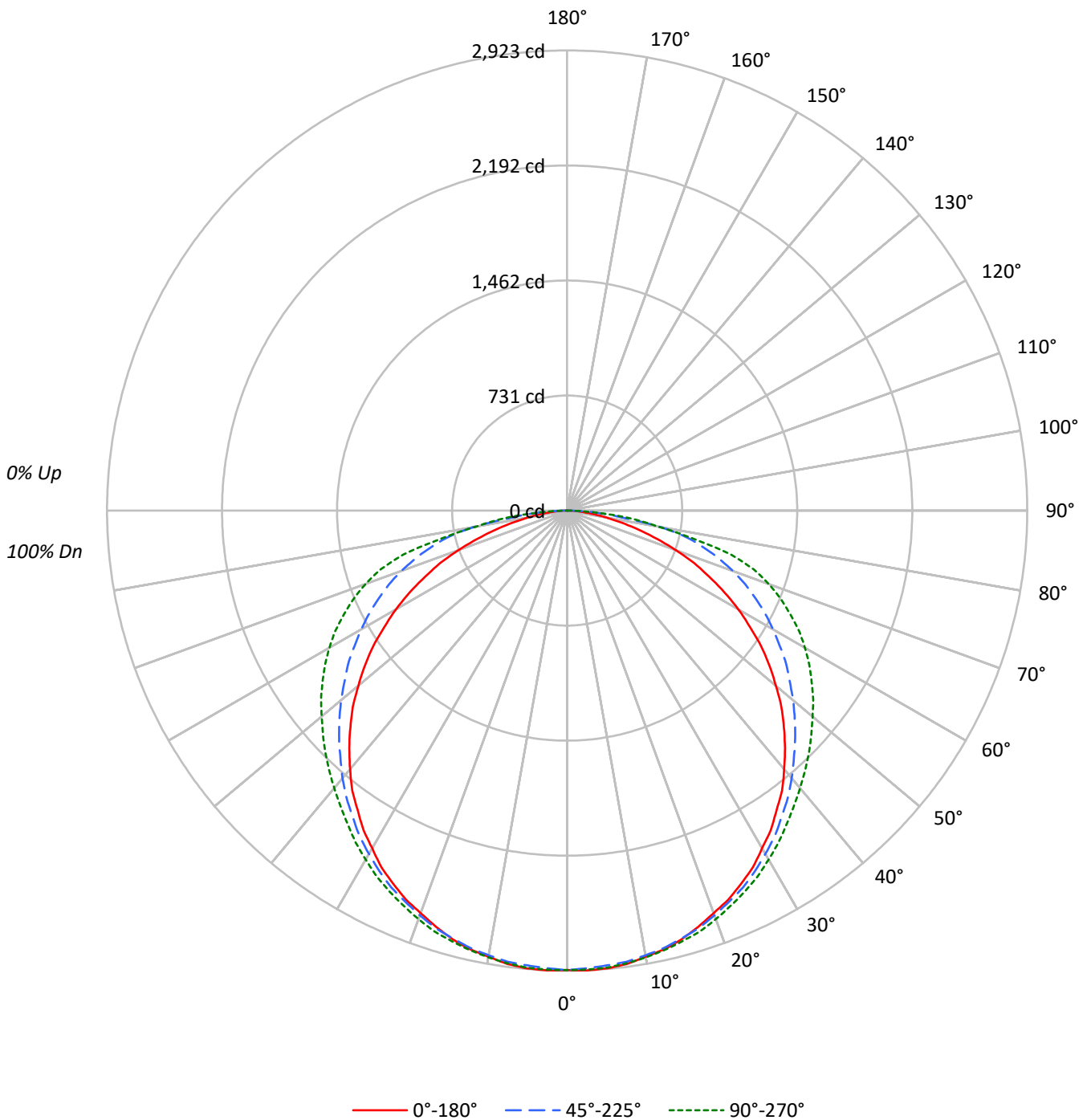
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3927	3927	3927
5°	3942	3917	3936
10°	3931	3919	3937
15°	3925	3918	3944
20°	3896	3916	3955
25°	3882	3923	3964
30°	3848	3912	3977
35°	3811	3902	3993
40°	3768	3897	4043
45°	3706	3898	4135
50°	3623	3922	4259
55°	3531	3985	4449
60°	3382	4063	4695
65°	3166	4207	4983
70°	2880	4401	5361
75°	2441	4643	5600
80°	1926	4673	4530
85°	1422	3554	3980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.9	3.0
10°-20°	796.8	8.6
20°-30°	1218.5	13.1
30°-40°	1489.6	16.0
40°-50°	1587.6	17.1
50°-60°	1518.0	16.4
60°-70°	1285.9	13.9
70°-80°	864.3	9.3
80°-90°	243.8	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°	2292.2	24.7
0°-40°	3781.9	40.7
0°-60°	6887.5	74.2
0°-90°	9281.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9281.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2919	2919	2919	2919	2919	
5°	2919	2914	2900	2914	2914	277
15°	2818	2818	2813	2836	2831	794
25°	2615	2624	2642	2666	2670	1205
35°	2320	2339	2376	2422	2431	1454
45°	1947	1980	2049	2136	2173	1502
55°	1505	1561	1699	1832	1897	1341
65°	994	1096	1321	1496	1565	987
75°	470	640	893	1045	1077	503
85°	92	189	230	249	258	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2918.8	2918.8	2918.8	2918.8	2918.8
2.5°	2923.4	2923.4	2909.6	2918.8	2918.8
5°	2918.8	2914.2	2900.4	2914.2	2914.2
7.5°	2905.0	2900.4	2891.1	2905.0	2900.4
10°	2877.3	2877.3	2868.1	2881.9	2881.9
12.5°	2854.3	2849.7	2845.1	2863.5	2858.9
15°	2817.5	2817.5	2812.9	2835.9	2831.3
17.5°	2771.4	2776.1	2780.7	2799.1	2803.7
20°	2720.8	2730.0	2734.6	2762.2	2762.2
22.5°	2674.8	2679.4	2688.6	2716.2	2716.2
25°	2614.9	2624.1	2642.5	2665.6	2670.2
27.5°	2555.1	2559.7	2582.7	2614.9	2619.5
30°	2476.8	2490.6	2518.2	2555.1	2559.7
32.5°	2407.8	2421.6	2453.8	2490.6	2499.8
35°	2320.3	2338.7	2375.5	2421.6	2430.8
37.5°	2242.0	2255.8	2301.9	2352.5	2366.3
40°	2145.3	2173.0	2219.0	2278.8	2301.9
42.5°	2048.7	2076.3	2131.5	2209.8	2237.4
45°	1947.4	1979.6	2048.7	2136.1	2173.0
47.5°	1846.1	1882.9	1961.2	2062.5	2103.9
50°	1731.0	1777.0	1873.7	1988.8	2034.8
52.5°	1620.5	1675.8	1781.6	1910.5	1970.4
55°	1505.4	1560.7	1698.8	1832.3	1896.7
57.5°	1376.5	1450.2	1602.1	1754.0	1823.1
60°	1256.8	1325.9	1510.0	1675.8	1744.8
62.5°	1127.9	1220.0	1417.9	1592.9	1661.9
65°	994.4	1095.7	1321.3	1496.2	1565.3
67.5°	874.7	985.2	1224.6	1399.5	1468.6
70°	732.0	870.1	1118.7	1293.6	1362.7
72.5°	598.5	750.4	1008.2	1178.6	1243.0
75°	469.6	639.9	893.1	1045.0	1077.3
77.5°	349.9	529.4	773.4	837.9	814.9
80°	248.6	423.5	603.1	570.9	584.7
82.5°	161.1	322.3	372.9	423.5	437.4
85°	92.1	188.8	230.2	248.6	257.8
87.5°	41.4	69.1	92.1	92.1	87.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)