

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: P388400

Luminaire Tested: **24CZ2-150VHE-SQR-UNV-L940-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: P388400
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-150VHE-SQR-UNV-L940-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12310.7 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

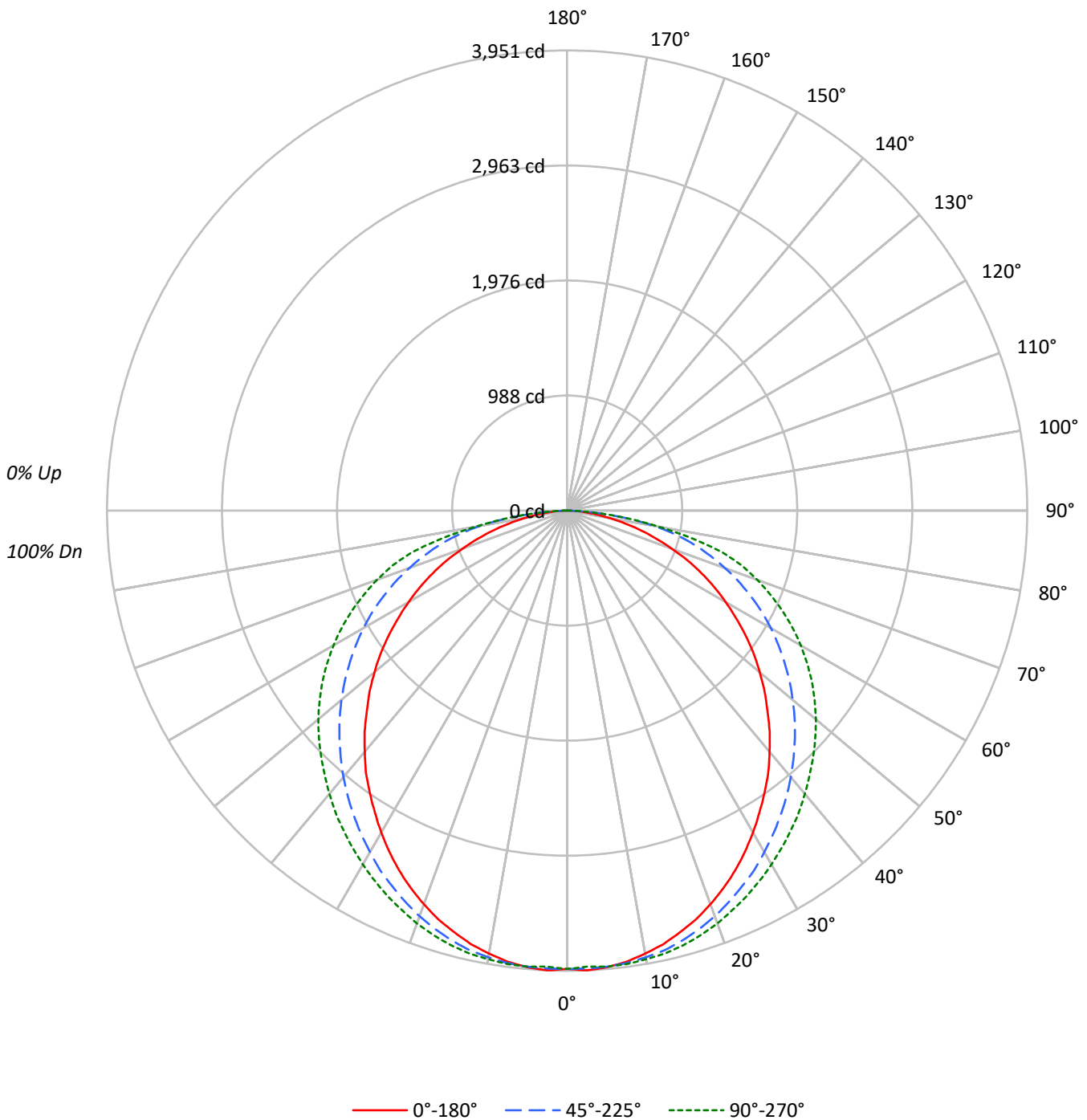
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51		62	55	50		60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44		55	49	43		54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34		45	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5295	5295	5295
5°	5315	5309	5309
10°	5276	5321	5343
15°	5221	5323	5379
20°	5151	5308	5402
25°	5063	5281	5419
30°	4958	5261	5451
35°	4854	5248	5502
40°	4748	5248	5576
45°	4626	5260	5685
50°	4518	5293	5837
55°	4387	5350	6017
60°	4233	5437	6236
65°	4051	5539	6497
70°	3758	5677	6829
75°	3402	5875	7143
80°	2866	5890	6142
85°	2197	4455	4455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.5	3.0
10°-20°	1074.7	8.7
20°-30°	1632.4	13.3
30°-40°	1985.6	16.1
40°-50°	2114.0	17.2
50°-60°	2013.5	16.4
60°-70°	1683.8	13.7
70°-80°	1122.6	9.1
80°-90°	310.6	2.5
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°	3080.6	25.0
0°-40°	5066.2	41.2
0°-60°	9193.6	74.7
0°-90°	12310.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12310.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3935	3935	3935	3935	3935	
5°	3935	3911	3931	3931	3931	373
15°	3748	3756	3821	3850	3862	1057
25°	3411	3455	3557	3618	3650	1570
35°	2955	3041	3195	3301	3350	1849
45°	2431	2561	2764	2919	2988	1879
55°	1870	2033	2281	2480	2565	1672
65°	1272	1459	1740	1955	2041	1257
75°	654	862	1130	1321	1374	693
85°	142	264	289	285	289	172
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3935.1	3935.1	3935.1	3935.1	3935.1
2.5°	3951.4	3922.9	3935.1	3935.1	3918.8
5°	3935.1	3910.7	3931.0	3931.0	3931.0
7.5°	3906.6	3886.3	3918.8	3927.0	3927.0
10°	3861.9	3853.8	3894.4	3906.6	3910.7
12.5°	3813.1	3809.1	3866.0	3882.3	3894.4
15°	3748.1	3756.2	3821.3	3849.7	3861.9
17.5°	3679.0	3695.3	3768.4	3809.1	3821.3
20°	3597.7	3622.1	3707.4	3748.1	3772.5
22.5°	3508.3	3544.8	3634.3	3683.1	3711.5
25°	3410.7	3455.4	3557.0	3618.0	3650.5
27.5°	3305.0	3361.9	3479.8	3548.9	3581.4
30°	3191.2	3256.2	3386.3	3467.6	3508.3
32.5°	3073.3	3150.5	3292.8	3382.2	3431.0
35°	2955.4	3040.8	3195.2	3300.9	3349.7
37.5°	2837.5	2922.9	3093.6	3207.4	3268.4
40°	2703.3	2805.0	2987.9	3113.9	3174.9
42.5°	2573.3	2683.0	2878.2	3016.4	3081.4
45°	2431.0	2561.1	2764.3	2918.8	2987.9
47.5°	2300.9	2431.0	2650.5	2813.1	2890.3
50°	2158.6	2296.8	2528.5	2707.4	2788.7
52.5°	2020.4	2162.7	2406.6	2597.7	2679.0
55°	1870.0	2032.6	2280.6	2479.8	2565.1
57.5°	1719.6	1894.4	2150.5	2357.8	2443.2
60°	1573.2	1752.1	2020.4	2227.7	2317.2
62.5°	1426.9	1605.7	1886.2	2097.6	2183.0
65°	1272.4	1459.4	1739.9	1955.4	2040.7
67.5°	1117.9	1313.1	1593.6	1809.0	1890.3
70°	955.3	1162.6	1443.1	1654.5	1735.8
72.5°	804.9	1012.2	1288.7	1496.0	1573.2
75°	654.5	861.8	1130.1	1321.2	1374.0
77.5°	508.1	715.5	955.3	1081.3	1093.5
80°	369.9	565.1	760.2	796.8	792.7
82.5°	248.0	422.8	524.4	528.5	540.7
85°	142.3	264.2	288.6	284.6	288.6
87.5°	56.9	93.5	81.3	61.0	61.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)