

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: P388678

Luminaire Tested: **24CZ2-150VHE-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: P388678
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-150VHE-UNV-L930-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12227.4 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

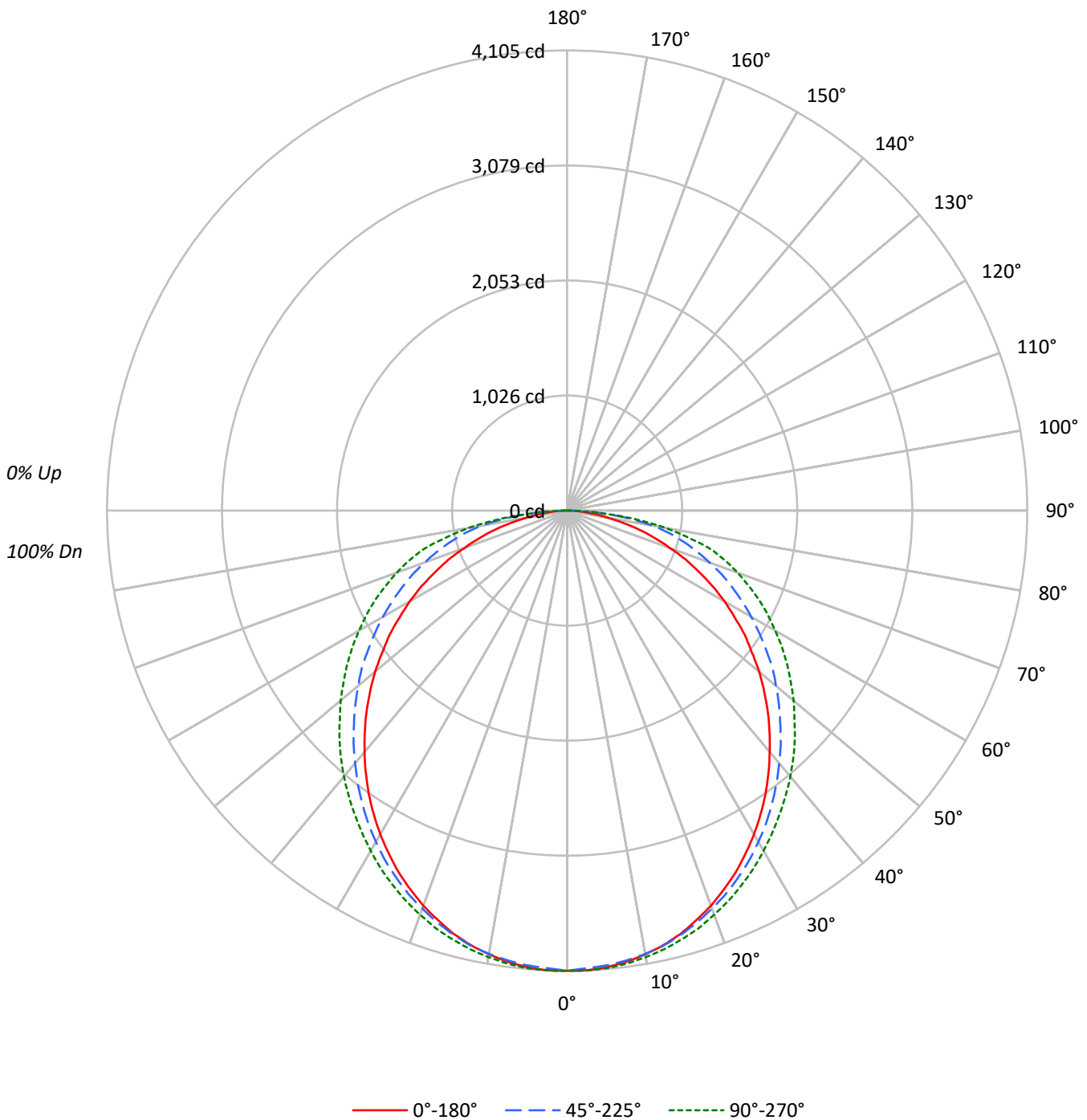
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5524	5524	5524
5°	5523	5501	5534
10°	5492	5486	5525
15°	5446	5457	5514
20°	5370	5411	5493
25°	5283	5362	5471
30°	5180	5300	5446
35°	5067	5235	5429
40°	4939	5168	5440
45°	4814	5117	5467
50°	4681	5091	5518
55°	4537	5083	5619
60°	4360	5106	5765
65°	4131	5184	6015
70°	3837	5314	6357
75°	3500	5580	6895
80°	2878	6008	6893
85°	2205	5544	5922



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	388.3	3.2
10°-20°	1108.5	9.1
20°-30°	1668.1	13.6
30°-40°	1999.0	16.3
40°-50°	2083.2	17.0
50°-60°	1938.1	15.9
60°-70°	1596.3	13.1
70°-80°	1087.2	8.9
80°-90°	358.9	2.9
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°	3164.8	25.9
0°-40°	5163.8	42.2
0°-60°	9185.0	75.1
0°-90°	12227.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12227.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4105	4105	4105	4105	4105	
5°	4089	4089	4073	4093	4097	388
15°	3909	3914	3918	3954	3958	1101
25°	3558	3575	3612	3673	3685	1638
35°	3085	3122	3187	3273	3306	1928
45°	2530	2583	2689	2824	2873	1951
55°	1934	2000	2167	2338	2395	1724
65°	1298	1408	1628	1820	1889	1288
75°	673	824	1073	1265	1326	710
85°	143	278	359	384	384	177
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4105.3	4105.3	4105.3	4105.3	4105.3
2.5°	4105.3	4105.3	4084.9	4105.3	4105.3
5°	4089.0	4089.0	4072.7	4093.1	4097.1
7.5°	4060.4	4064.5	4048.2	4072.7	4076.7
10°	4019.6	4023.7	4015.5	4040.0	4044.1
12.5°	3970.6	3974.7	3974.7	4003.3	4007.4
15°	3909.4	3913.5	3917.6	3954.3	3958.4
17.5°	3831.9	3844.1	3852.3	3897.2	3905.3
20°	3750.3	3762.5	3778.8	3827.8	3836.0
22.5°	3656.4	3672.7	3701.3	3754.4	3766.6
25°	3558.5	3574.8	3611.5	3672.7	3685.0
27.5°	3448.3	3472.8	3517.7	3583.0	3599.3
30°	3334.0	3358.5	3411.6	3480.9	3505.4
32.5°	3211.6	3244.3	3305.5	3383.0	3407.5
35°	3085.1	3121.8	3187.1	3272.8	3305.5
37.5°	2950.4	2991.2	3068.8	3162.6	3203.4
40°	2811.7	2860.7	2942.3	3052.5	3097.3
42.5°	2672.9	2717.8	2819.8	2938.2	2987.2
45°	2530.1	2583.2	2689.3	2823.9	2872.9
47.5°	2383.2	2436.3	2562.8	2705.6	2750.5
50°	2236.3	2289.3	2432.2	2583.2	2636.2
52.5°	2077.1	2146.5	2309.7	2460.7	2513.8
55°	1934.3	1999.6	2166.9	2338.3	2395.4
57.5°	1771.1	1848.6	2032.2	2211.8	2273.0
60°	1620.1	1701.7	1897.6	2081.2	2142.4
62.5°	1465.0	1554.8	1762.9	1950.6	2020.0
65°	1297.7	1407.9	1628.2	1820.0	1889.4
67.5°	1146.7	1261.0	1493.6	1689.5	1750.7
70°	975.3	1114.1	1350.8	1546.6	1616.0
72.5°	828.4	967.2	1216.1	1407.9	1477.3
75°	673.3	824.3	1073.3	1265.1	1326.3
77.5°	518.3	685.6	934.5	1081.4	1101.8
80°	371.4	546.8	775.4	861.1	889.6
82.5°	261.2	420.3	571.3	628.4	644.8
85°	142.8	277.5	359.1	383.6	383.6
87.5°	61.2	118.3	142.8	146.9	151.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)