

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: P388682

Luminaire Tested: **24CZ2-150VHE-UNV-L935-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: P388682
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-L935-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12687.3 lumens
Efficiency: N/A
Efficacy: 121.8 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

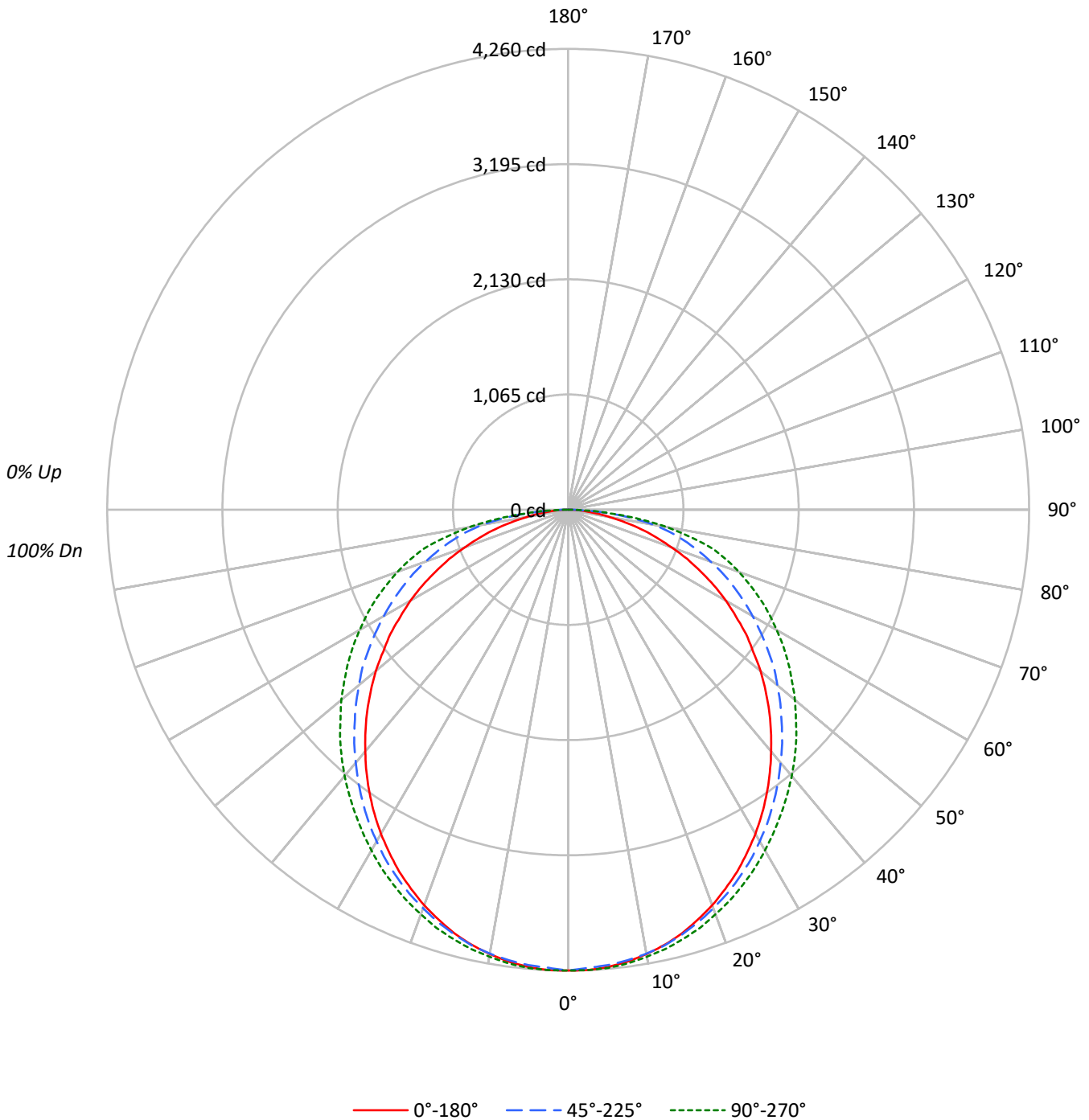
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5731	5731	5731
5°	5730	5707	5742
10°	5698	5693	5733
15°	5651	5662	5721
20°	5572	5614	5699
25°	5482	5563	5676
30°	5375	5500	5651
35°	5258	5432	5634
40°	5124	5362	5645
45°	4995	5310	5672
50°	4857	5282	5726
55°	4708	5274	5830
60°	4524	5299	5982
65°	4287	5379	6242
70°	3981	5514	6596
75°	3632	5789	7154
80°	2985	6234	7153
85°	2288	5752	6144



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.9	3.2
10°-20°	1150.2	9.1
20°-30°	1730.8	13.6
30°-40°	2074.2	16.3
40°-50°	2161.5	17.0
50°-60°	2011.0	15.9
60°-70°	1656.3	13.1
70°-80°	1128.0	8.9
80°-90°	372.4	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°	3283.8	25.9
0°-40°	5358.0	42.2
0°-60°	9530.5	75.1
0°-90°	12687.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12687.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4260	4260	4260	4260	4260	
5°	4243	4243	4226	4247	4251	403
15°	4056	4061	4065	4103	4107	1143
25°	3692	3709	3747	3811	3824	1700
35°	3201	3239	3307	3396	3430	2001
45°	2625	2680	2790	2930	2981	2025
55°	2007	2075	2248	2426	2486	1789
65°	1346	1461	1690	1888	1960	1337
75°	699	855	1114	1313	1376	737
85°	148	288	373	398	398	184
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4259.7	4259.7	4259.7	4259.7	4259.7
2.5°	4259.7	4259.7	4238.5	4259.7	4259.7
5°	4242.8	4242.8	4225.8	4247.0	4251.2
7.5°	4213.1	4217.4	4200.4	4225.8	4230.1
10°	4170.8	4175.0	4166.6	4192.0	4196.2
12.5°	4120.0	4124.2	4124.2	4153.9	4158.1
15°	4056.5	4060.7	4064.9	4103.0	4107.3
17.5°	3976.0	3988.7	3997.2	4043.8	4052.2
20°	3891.3	3904.0	3921.0	3971.8	3980.3
22.5°	3793.9	3810.9	3840.5	3895.6	3908.3
25°	3692.3	3709.3	3747.4	3810.9	3823.6
27.5°	3578.0	3603.4	3650.0	3717.7	3734.7
30°	3459.4	3484.8	3539.9	3611.9	3637.3
32.5°	3332.4	3366.3	3429.8	3510.2	3535.6
35°	3201.1	3239.2	3307.0	3395.9	3429.8
37.5°	3061.4	3103.7	3184.2	3281.6	3323.9
40°	2917.4	2968.3	3052.9	3167.3	3213.8
42.5°	2773.5	2820.1	2925.9	3048.7	3099.5
45°	2625.3	2680.3	2790.4	2930.1	2981.0
47.5°	2472.8	2527.9	2659.1	2807.3	2853.9
50°	2320.4	2375.4	2523.6	2680.3	2735.4
52.5°	2155.3	2227.2	2396.6	2553.3	2608.3
55°	2007.1	2074.8	2248.4	2426.3	2485.5
57.5°	1837.7	1918.1	2108.7	2295.0	2358.5
60°	1681.0	1765.7	1969.0	2159.5	2223.0
62.5°	1520.1	1613.3	1829.2	2024.0	2096.0
65°	1346.5	1460.8	1689.5	1888.5	1960.5
67.5°	1189.8	1308.4	1549.8	1753.0	1816.5
70°	1012.0	1156.0	1401.6	1604.8	1676.8
72.5°	859.6	1003.5	1261.8	1460.8	1532.8
75°	698.7	855.3	1113.6	1312.6	1376.2
77.5°	537.8	711.4	969.7	1122.1	1143.3
80°	385.3	567.4	804.5	893.4	923.1
82.5°	271.0	436.1	592.8	652.1	669.0
85°	148.2	287.9	372.6	398.0	398.0
87.5°	63.5	122.8	148.2	152.4	156.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)