

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: P389576

Luminaire Tested: **24CZ2-120VHE-S-UNV-L950-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: P389576
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-S-UNV-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11633.5 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

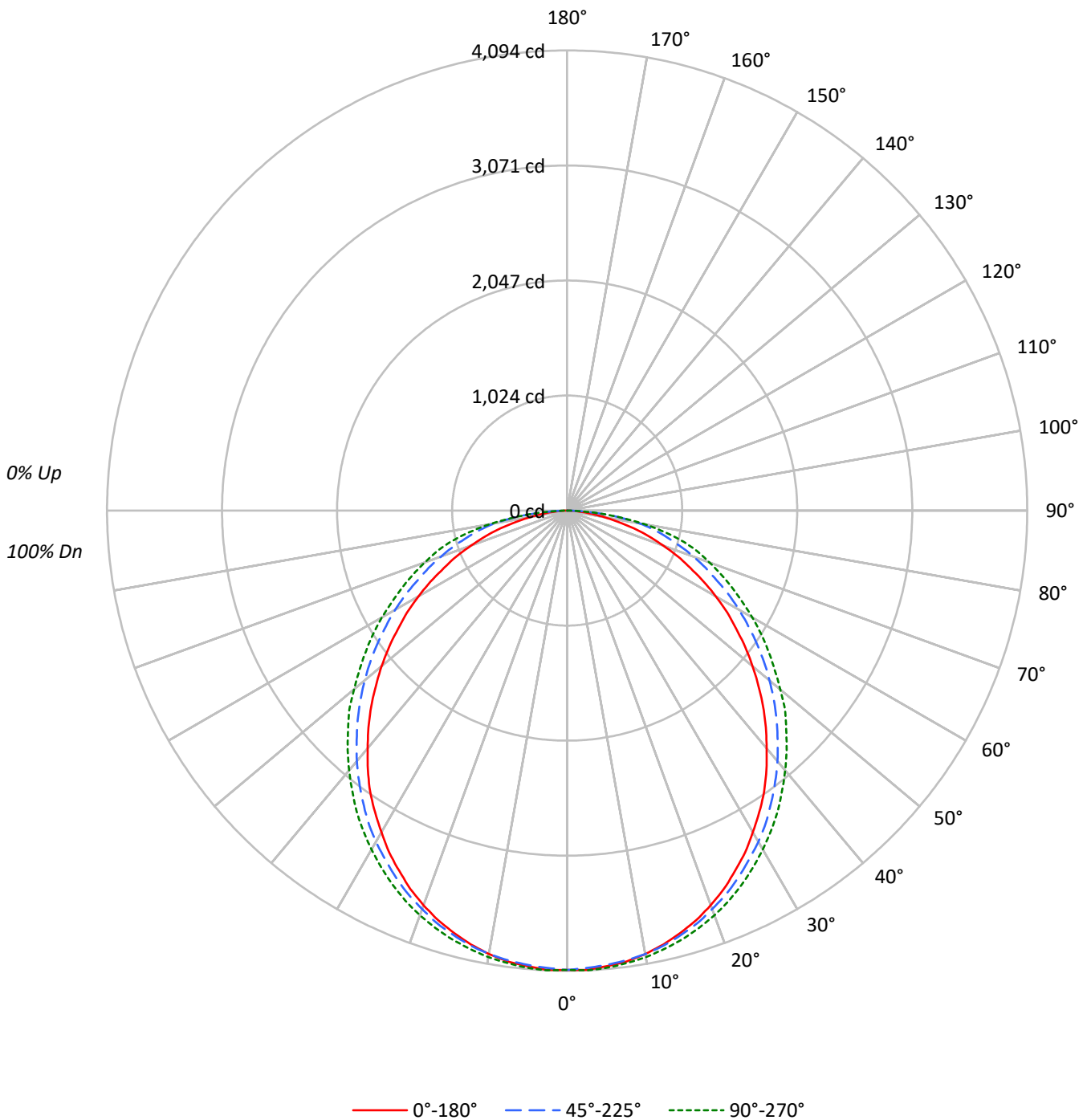
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5499	5499	5499
5°	5495	5480	5515
10°	5473	5473	5513
15°	5420	5446	5502
20°	5349	5402	5487
25°	5250	5349	5453
30°	5132	5287	5408
35°	5020	5202	5366
40°	4848	5114	5303
45°	4690	5013	5245
50°	4509	4919	5182
55°	4308	4828	5132
60°	4107	4753	5121
65°	3847	4670	5153
70°	3561	4696	5292
75°	3189	4783	5590
80°	2577	5068	5469
85°	1939	4449	4335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.9	3.3
10°-20°	1105.5	9.5
20°-30°	1661.9	14.3
30°-40°	1979.6	17.0
40°-50°	2026.0	17.4
50°-60°	1824.0	15.7
60°-70°	1432.4	12.3
70°-80°	929.7	8.0
80°-90°	287.5	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°	3154.3	27.1
0°-40°	5133.9	44.1
0°-60°	8983.9	77.2
0°-90°	11633.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11633.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4087	4087	4087	4087	4087	
5°	4068	4076	4057	4080	4083	387
15°	3891	3902	3910	3943	3950	1097
25°	3536	3566	3603	3662	3673	1629
35°	3056	3093	3167	3244	3267	1906
45°	2465	2524	2635	2734	2757	1900
55°	1836	1918	2058	2165	2188	1646
65°	1208	1301	1467	1589	1618	1203
75°	613	732	920	1046	1075	649
85°	126	233	288	281	281	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4086.9	4086.9	4086.9	4086.9	4086.9
2.5°	4090.6	4090.6	4072.1	4090.6	4094.3
5°	4068.4	4075.8	4057.4	4079.5	4083.2
7.5°	4046.3	4046.3	4035.2	4057.4	4061.1
10°	4005.6	4009.3	4005.6	4031.5	4035.2
12.5°	3953.9	3961.3	3965.0	3990.8	3994.5
15°	3891.1	3902.2	3909.6	3942.8	3950.2
17.5°	3820.9	3832.0	3850.4	3887.4	3894.8
20°	3735.9	3750.7	3772.8	3820.9	3832.0
22.5°	3643.5	3658.3	3695.2	3739.6	3758.0
25°	3536.3	3565.9	3602.8	3662.0	3673.1
27.5°	3429.2	3455.0	3503.1	3565.9	3580.7
30°	3303.5	3344.2	3403.3	3466.1	3480.9
32.5°	3181.6	3222.2	3292.5	3359.0	3377.4
35°	3056.0	3092.9	3166.8	3244.4	3266.6
37.5°	2911.8	2959.9	3041.2	3118.8	3140.9
40°	2760.3	2819.5	2911.8	2993.1	3019.0
42.5°	2616.2	2679.0	2771.4	2860.1	2889.7
45°	2464.7	2523.8	2634.7	2734.5	2756.6
47.5°	2309.5	2376.0	2494.3	2594.1	2631.0
50°	2154.3	2224.5	2350.2	2453.6	2475.8
52.5°	1999.1	2073.0	2206.1	2316.9	2328.0
55°	1836.5	1917.8	2058.2	2165.4	2187.6
57.5°	1688.7	1758.9	1910.4	2021.3	2047.2
60°	1526.1	1603.7	1766.3	1869.8	1903.0
62.5°	1370.9	1452.2	1622.2	1725.7	1755.2
65°	1208.3	1300.7	1467.0	1588.9	1618.5
67.5°	1067.9	1156.6	1334.0	1452.2	1481.8
70°	905.3	1005.1	1193.6	1315.5	1345.1
72.5°	764.9	868.4	1056.8	1175.1	1219.4
75°	613.4	731.7	920.1	1045.8	1075.3
77.5°	465.6	602.3	794.5	890.6	890.6
80°	332.6	476.7	654.1	698.4	705.8
82.5°	218.0	358.4	484.1	480.4	480.4
85°	125.6	232.8	288.2	280.8	280.8
87.5°	48.0	96.1	103.5	103.5	99.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)