

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: P389569

Luminaire Tested: **24CZ2-120VHE-S-UNV-L935-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: P389569
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-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10713.4 lumens
Efficiency: N/A
Efficacy: 128.2 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

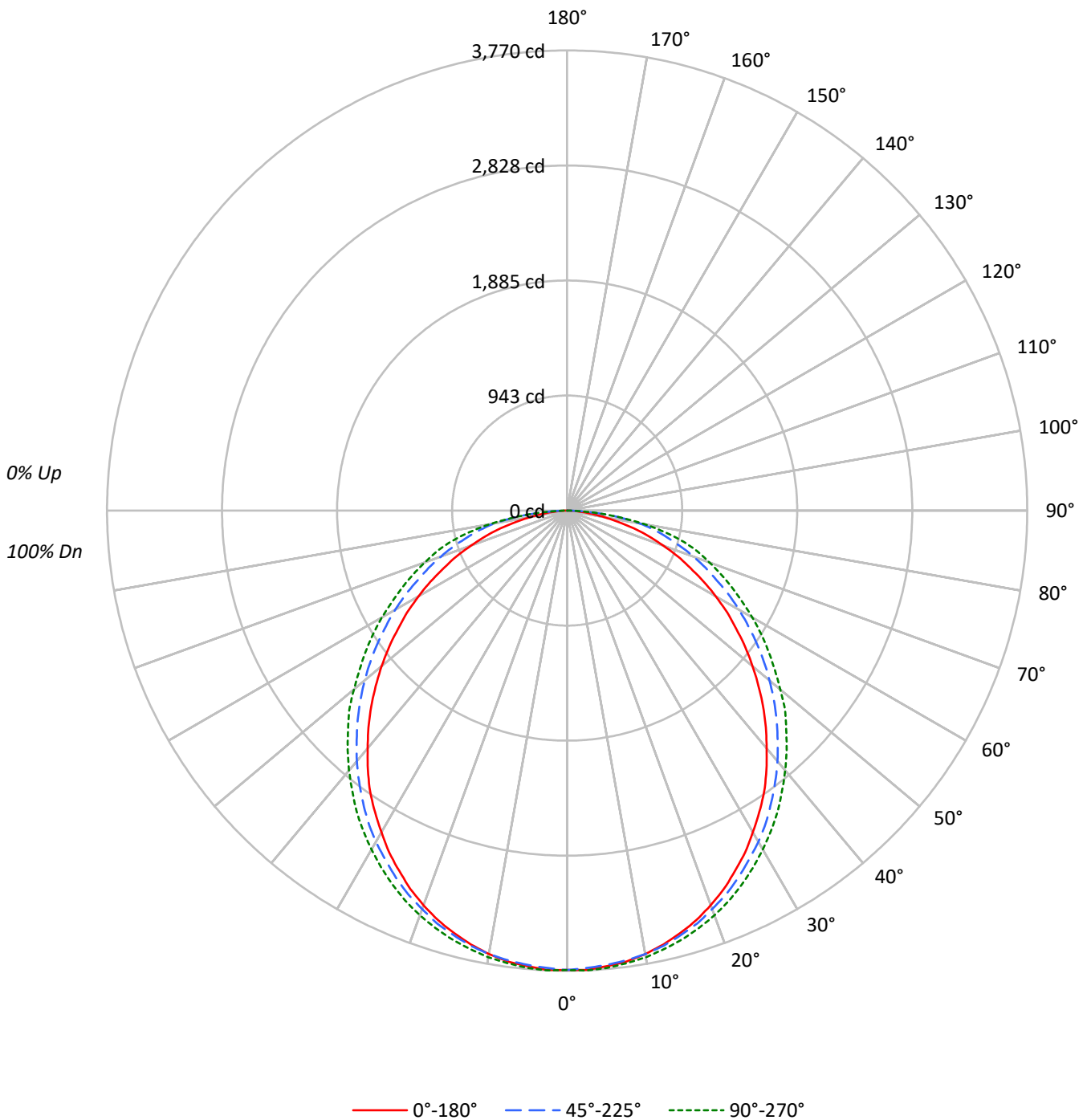
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5064	5064	5064
5°	5060	5047	5079
10°	5040	5040	5077
15°	4991	5015	5067
20°	4926	4975	5053
25°	4835	4926	5022
30°	4727	4869	4980
35°	4623	4790	4941
40°	4465	4710	4883
45°	4319	4617	4830
50°	4153	4530	4773
55°	3967	4446	4726
60°	3782	4377	4716
65°	3543	4301	4745
70°	3280	4324	4873
75°	2937	4405	5148
80°	2373	4667	5036
85°	1786	4097	3992



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.3	3.3
10°-20°	1018.1	9.5
20°-30°	1530.4	14.3
30°-40°	1823.0	17.0
40°-50°	1865.8	17.4
50°-60°	1679.7	15.7
60°-70°	1319.1	12.3
70°-80°	856.1	8.0
80°-90°	264.8	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°	2904.9	27.1
0°-40°	4727.9	44.1
0°-60°	8273.3	77.2
0°-90°	10713.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10713.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3764	3764	3764	3764	3764	
5°	3747	3754	3736	3757	3760	356
15°	3583	3594	3600	3631	3638	1010
25°	3257	3284	3318	3372	3383	1500
35°	2814	2848	2916	2988	3008	1756
45°	2270	2324	2426	2518	2539	1750
55°	1691	1766	1896	1994	2015	1516
65°	1113	1198	1351	1463	1490	1108
75°	565	674	847	963	990	598
85°	116	214	265	259	259	140
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3763.7	3763.7	3763.7	3763.7	3763.7
2.5°	3767.1	3767.1	3750.1	3767.1	3770.5
5°	3746.7	3753.5	3736.5	3756.9	3760.3
7.5°	3726.3	3726.3	3716.0	3736.5	3739.9
10°	3688.8	3692.2	3688.8	3712.6	3716.0
12.5°	3641.2	3648.0	3651.4	3675.2	3678.6
15°	3583.3	3593.5	3600.3	3631.0	3637.8
17.5°	3518.7	3528.9	3545.9	3579.9	3586.7
20°	3440.4	3454.0	3474.4	3518.7	3528.9
22.5°	3355.3	3368.9	3403.0	3443.8	3460.8
25°	3256.6	3283.9	3317.9	3372.3	3382.6
27.5°	3158.0	3181.8	3226.0	3283.9	3297.5
30°	3042.3	3079.7	3134.1	3192.0	3205.6
32.5°	2930.0	2967.4	3032.0	3093.3	3110.3
35°	2814.3	2848.3	2916.3	2987.8	3008.2
37.5°	2681.5	2725.8	2800.6	2872.1	2892.5
40°	2542.0	2596.5	2681.5	2756.4	2780.2
42.5°	2409.3	2467.2	2552.2	2633.9	2661.1
45°	2269.8	2324.2	2426.3	2518.2	2538.6
47.5°	2126.9	2188.1	2297.0	2388.9	2422.9
50°	1983.9	2048.6	2164.3	2259.6	2280.0
52.5°	1841.0	1909.1	2031.6	2133.7	2143.9
55°	1691.3	1766.1	1895.5	1994.1	2014.6
57.5°	1555.2	1619.8	1759.3	1861.4	1885.2
60°	1405.4	1476.9	1626.6	1721.9	1752.5
62.5°	1262.5	1337.4	1493.9	1589.2	1616.4
65°	1112.8	1197.8	1351.0	1463.3	1490.5
67.5°	983.5	1065.1	1228.5	1337.4	1364.6
70°	833.7	925.6	1099.2	1211.5	1238.7
72.5°	704.4	799.7	973.3	1082.1	1123.0
75°	564.9	673.8	847.3	963.0	990.3
77.5°	428.8	554.7	731.6	820.1	820.1
80°	306.3	439.0	602.3	643.2	650.0
82.5°	200.8	330.1	445.8	442.4	442.4
85°	115.7	214.4	265.4	258.6	258.6
87.5°	44.2	88.5	95.3	95.3	91.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)