

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: P388351

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L940-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: P388351
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: 24CZ2-120VHE-SQR-UNV-L940-CD2-SWPD1-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: 9893.4 lumens
Efficiency: N/A
Efficacy: 118.3 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

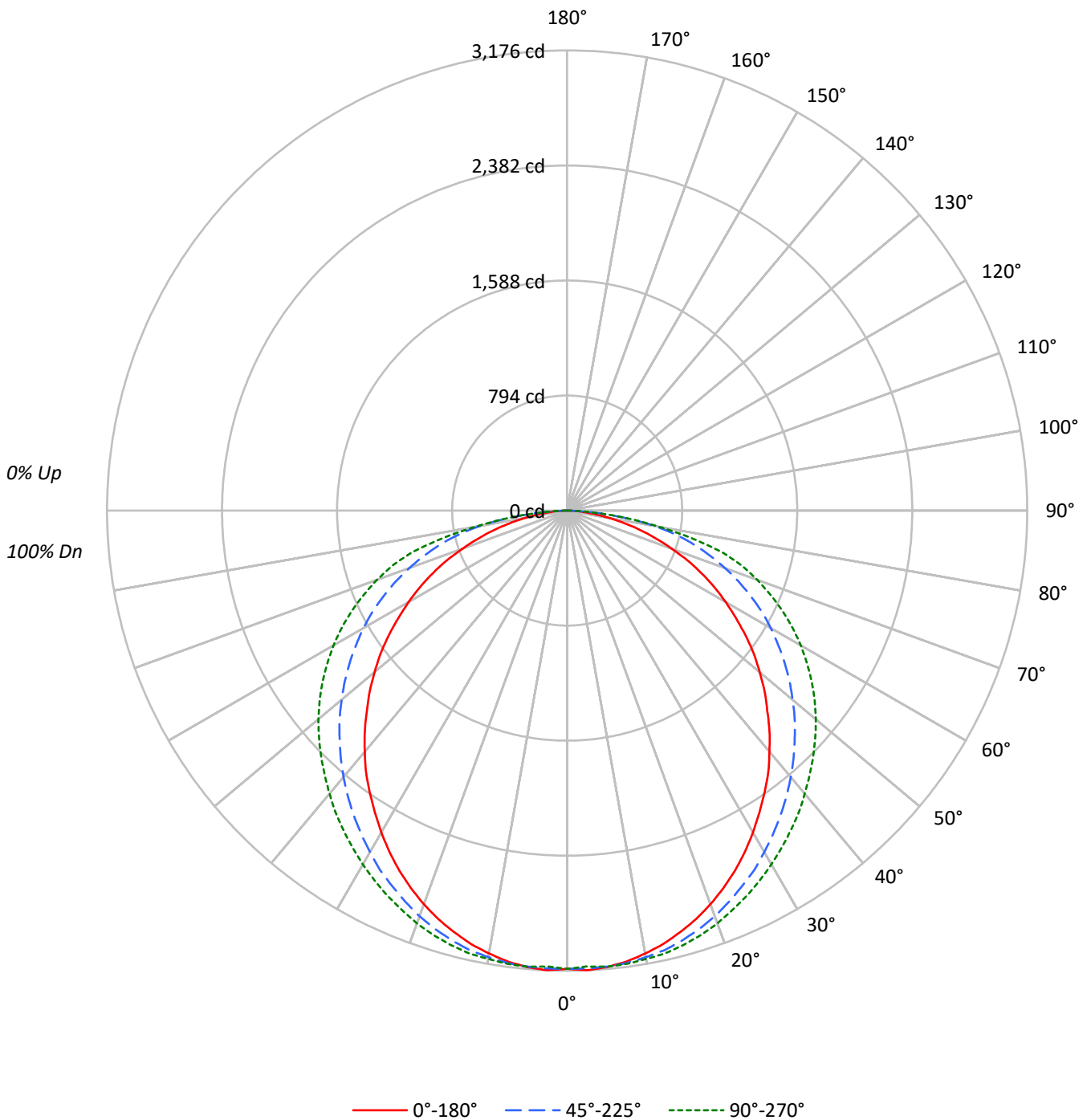
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	4255	4255	4255
5°	4271	4267	4267
10°	4240	4276	4294
15°	4196	4278	4323
20°	4140	4266	4341
25°	4069	4244	4355
30°	3984	4228	4380
35°	3901	4218	4422
40°	3816	4217	4481
45°	3717	4227	4569
50°	3631	4253	4691
55°	3525	4299	4836
60°	3402	4369	5011
65°	3256	4452	5221
70°	3020	4563	5488
75°	2734	4721	5740
80°	2304	4733	4936
85°	1765	3582	3582



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.2	3.0
10°-20°	863.7	8.7
20°-30°	1311.9	13.3
30°-40°	1595.7	16.1
40°-50°	1698.9	17.2
50°-60°	1618.1	16.4
60°-70°	1353.2	13.7
70°-80°	902.2	9.1
80°-90°	249.6	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°	2475.7	25.0
0°-40°	4071.4	41.2
0°-60°	7388.4	74.7
0°-90°	9893.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9893.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3162	3162	3162	3162	3162	
5°	3162	3143	3159	3159	3159	300
15°	3012	3019	3071	3094	3104	849
25°	2741	2777	2859	2908	2934	1262
35°	2375	2444	2568	2653	2692	1486
45°	1954	2058	2222	2346	2401	1510
55°	1503	1634	1833	1993	2061	1343
65°	1023	1173	1398	1571	1640	1010
75°	526	693	908	1062	1104	557
85°	114	212	232	229	232	138
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3162.4	3162.4	3162.4	3162.4	3162.4
2.5°	3175.5	3152.6	3162.4	3162.4	3149.3
5°	3162.4	3142.8	3159.1	3159.1	3159.1
7.5°	3139.5	3123.2	3149.3	3155.9	3155.9
10°	3103.6	3097.1	3129.7	3139.5	3142.8
12.5°	3064.4	3061.1	3106.9	3119.9	3129.7
15°	3012.1	3018.7	3070.9	3093.8	3103.6
17.5°	2956.6	2969.7	3028.5	3061.1	3070.9
20°	2891.3	2910.9	2979.5	3012.1	3031.7
22.5°	2819.4	2848.8	2920.7	2959.9	2982.7
25°	2741.0	2776.9	2858.6	2907.6	2933.7
27.5°	2656.0	2701.8	2796.5	2852.1	2878.2
30°	2564.6	2616.8	2721.4	2786.7	2819.4
32.5°	2469.8	2531.9	2646.2	2718.1	2757.3
35°	2375.1	2443.7	2567.8	2652.8	2692.0
37.5°	2280.3	2348.9	2486.2	2577.6	2626.6
40°	2172.5	2254.2	2401.2	2502.5	2551.5
42.5°	2068.0	2156.2	2313.0	2424.1	2476.4
45°	1953.6	2058.2	2221.5	2345.7	2401.2
47.5°	1849.1	1953.6	2130.1	2260.7	2322.8
50°	1734.8	1845.8	2032.0	2175.8	2241.1
52.5°	1623.7	1738.0	1934.0	2087.6	2152.9
55°	1502.8	1633.5	1832.8	1992.8	2061.4
57.5°	1381.9	1522.4	1728.2	1894.8	1963.4
60°	1264.3	1408.1	1623.7	1790.3	1862.2
62.5°	1146.7	1290.4	1515.9	1685.7	1754.4
65°	1022.6	1172.8	1398.3	1571.4	1640.0
67.5°	898.4	1055.2	1280.6	1453.8	1519.1
70°	767.7	934.3	1159.8	1329.7	1395.0
72.5°	646.9	813.5	1035.6	1202.2	1264.3
75°	526.0	692.6	908.2	1061.8	1104.2
77.5°	408.4	575.0	767.7	869.0	878.8
80°	297.3	454.1	610.9	640.3	637.1
82.5°	199.3	339.8	421.4	424.7	434.5
85°	114.3	212.4	232.0	228.7	232.0
87.5°	45.7	75.1	65.3	49.0	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)