

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: P388398

Luminaire Tested: **24CZ2-150VHE-SQR-UNV-L940-CD2-SDWPD1-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: P388398
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: 24CZ2-150VHE-SQR-UNV-L940-CD2-SDWPD1-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: 12011.3 lumens
Efficiency: N/A
Efficacy: 115.3 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

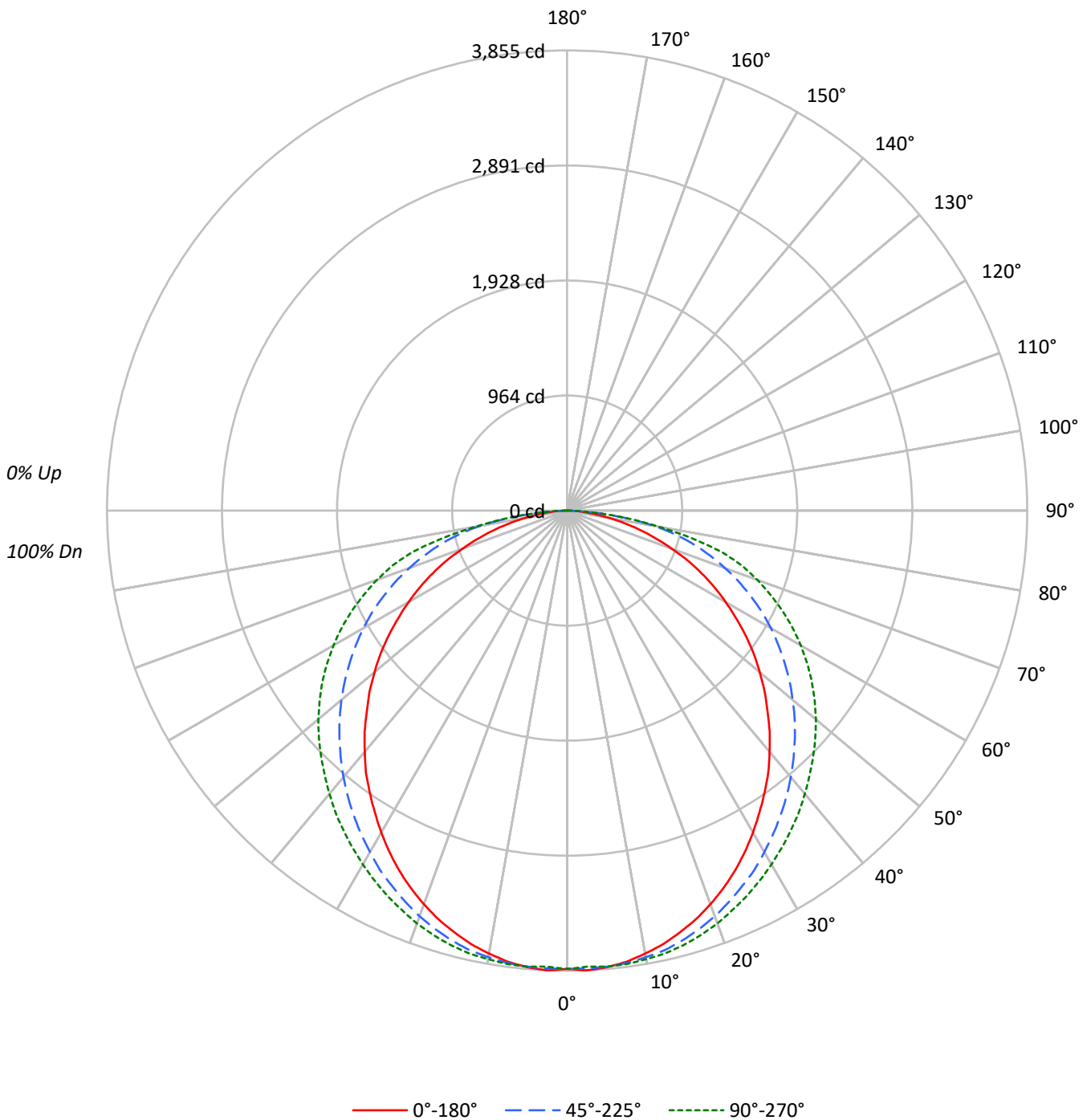
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5166	5166	5166
5°	5186	5180	5180
10°	5148	5191	5213
15°	5094	5193	5249
20°	5026	5179	5270
25°	4940	5152	5288
30°	4837	5133	5318
35°	4736	5121	5368
40°	4633	5120	5441
45°	4513	5132	5547
50°	4409	5164	5695
55°	4280	5220	5871
60°	4131	5305	6084
65°	3953	5405	6339
70°	3667	5539	6663
75°	3320	5732	6969
80°	2796	5747	5993
85°	2143	4347	4347



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.4	3.0
10°-20°	1048.6	8.7
20°-30°	1592.7	13.3
30°-40°	1937.3	16.1
40°-50°	2062.6	17.2
50°-60°	1964.5	16.4
60°-70°	1642.9	13.7
70°-80°	1095.3	9.1
80°-90°	303.1	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°	3005.7	25.0
0°-40°	4942.9	41.2
0°-60°	8970.0	74.7
0°-90°	12011.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12011.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3839	3839	3839	3839	3839	
5°	3839	3816	3835	3835	3835	364
15°	3657	3665	3728	3756	3768	1031
25°	3328	3371	3470	3530	3562	1532
35°	2884	2967	3118	3221	3268	1804
45°	2372	2499	2697	2848	2915	1834
55°	1824	1983	2225	2420	2503	1631
65°	1242	1424	1698	1908	1991	1227
75°	639	841	1103	1289	1341	676
85°	139	258	282	278	282	168
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3839.4	3839.4	3839.4	3839.4	3839.4
2.5°	3855.3	3827.5	3839.4	3839.4	3823.5
5°	3839.4	3815.6	3835.4	3835.4	3835.4
7.5°	3811.6	3791.8	3823.5	3831.5	3831.5
10°	3768.0	3760.1	3799.7	3811.6	3815.6
12.5°	3720.4	3716.4	3772.0	3787.8	3799.7
15°	3656.9	3664.9	3728.3	3756.1	3768.0
17.5°	3589.5	3605.4	3676.8	3716.4	3728.3
20°	3510.2	3534.0	3617.3	3656.9	3680.7
22.5°	3422.9	3458.6	3545.9	3593.5	3621.2
25°	3327.7	3371.4	3470.5	3530.0	3561.8
27.5°	3224.6	3280.1	3395.2	3462.6	3494.3
30°	3113.6	3177.0	3303.9	3383.3	3422.9
32.5°	2998.5	3073.9	3212.7	3300.0	3347.6
35°	2883.5	2966.8	3117.5	3220.7	3268.2
37.5°	2768.5	2851.8	3018.4	3129.4	3188.9
40°	2637.6	2736.8	2915.2	3038.2	3097.7
42.5°	2510.7	2617.8	2808.2	2943.0	3006.5
45°	2371.9	2498.8	2697.1	2847.8	2915.2
47.5°	2244.9	2371.9	2586.0	2744.7	2820.1
50°	2106.1	2241.0	2467.0	2641.6	2720.9
52.5°	1971.3	2110.1	2348.1	2534.5	2613.8
55°	1824.5	1983.2	2225.1	2419.5	2502.7
57.5°	1677.8	1848.3	2098.2	2300.5	2383.8
60°	1535.0	1709.5	1971.3	2173.5	2260.8
62.5°	1392.2	1566.7	1840.4	2046.6	2129.9
65°	1241.5	1423.9	1697.6	1907.8	1991.1
67.5°	1090.7	1281.1	1554.8	1765.0	1844.3
70°	932.1	1134.4	1408.0	1614.3	1693.6
72.5°	785.3	987.6	1257.3	1459.6	1535.0
75°	638.6	840.9	1102.6	1289.1	1340.6
77.5°	495.8	698.1	932.1	1055.0	1066.9
80°	360.9	551.3	741.7	777.4	773.4
82.5°	241.9	412.5	511.7	515.6	527.5
85°	138.8	257.8	281.6	277.6	281.6
87.5°	55.5	91.2	79.3	59.5	59.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)