

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: P388396

Luminaire Tested: **24CZ2-150VHE-SQR-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: P388396
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-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12033.5 lumens
Efficiency: N/A
Efficacy: 115.5 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

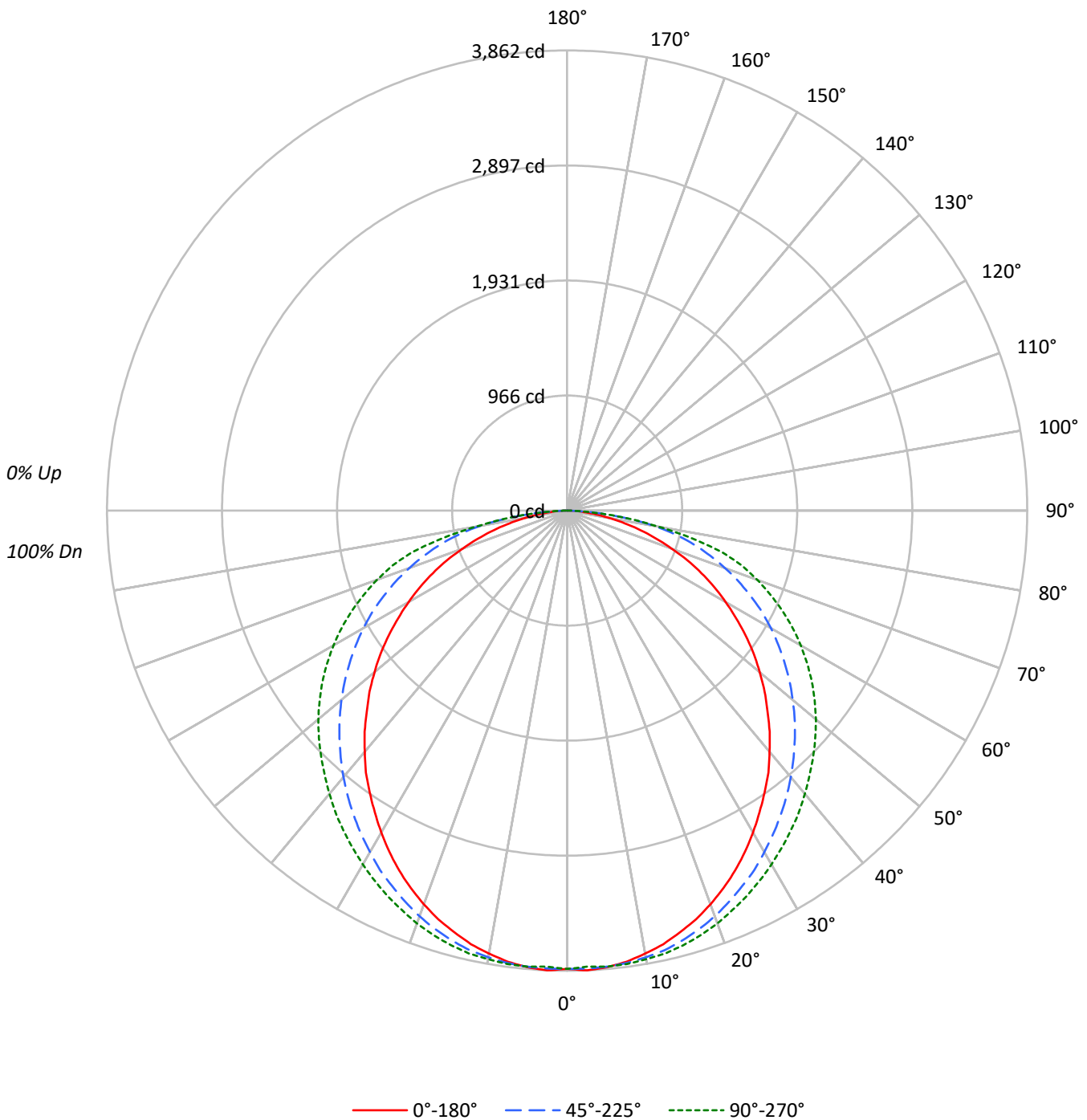
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5175	5175	5175
5°	5195	5190	5190
10°	5158	5201	5223
15°	5103	5203	5258
20°	5035	5189	5280
25°	4949	5162	5297
30°	4846	5143	5328
35°	4745	5130	5378
40°	4641	5130	5451
45°	4521	5142	5557
50°	4417	5174	5706
55°	4288	5229	5882
60°	4138	5314	6095
65°	3960	5415	6351
70°	3674	5549	6675
75°	3326	5743	6982
80°	2802	5758	6004
85°	2147	4355	4355



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.1	3.0
10°-20°	1050.5	8.7
20°-30°	1595.6	13.3
30°-40°	1940.9	16.1
40°-50°	2066.4	17.2
50°-60°	1968.1	16.4
60°-70°	1645.9	13.7
70°-80°	1097.4	9.1
80°-90°	303.6	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°	3011.2	25.0
0°-40°	4952.1	41.2
0°-60°	8986.6	74.7
0°-90°	12033.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12033.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3846	3846	3846	3846	3846	
5°	3846	3823	3842	3842	3842	365
15°	3664	3672	3735	3763	3775	1033
25°	3334	3378	3477	3536	3568	1535
35°	2889	2972	3123	3227	3274	1808
45°	2376	2503	2702	2853	2921	1837
55°	1828	1987	2229	2424	2507	1634
65°	1244	1426	1701	1911	1995	1229
75°	640	842	1105	1291	1343	678
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°	3846.5	3846.5	3846.5	3846.5	3846.5
2.5°	3862.4	3834.6	3846.5	3846.5	3830.6
5°	3846.5	3822.7	3842.5	3842.5	3842.5
7.5°	3818.7	3798.8	3830.6	3838.5	3838.5
10°	3775.0	3767.0	3806.8	3818.7	3822.7
12.5°	3727.3	3723.3	3778.9	3794.8	3806.8
15°	3663.7	3671.7	3735.2	3763.0	3775.0
17.5°	3596.2	3612.0	3683.6	3723.3	3735.2
20°	3516.7	3540.5	3624.0	3663.7	3687.5
22.5°	3429.3	3465.0	3552.4	3600.1	3627.9
25°	3333.9	3377.6	3476.9	3536.5	3568.3
27.5°	3230.6	3286.2	3401.4	3469.0	3500.8
30°	3119.3	3182.9	3310.0	3389.5	3429.3
32.5°	3004.1	3079.6	3218.7	3306.1	3353.8
35°	2888.8	2972.3	3123.3	3226.6	3274.3
37.5°	2773.6	2857.1	3023.9	3135.2	3194.8
40°	2642.5	2741.8	2920.6	3043.8	3103.4
42.5°	2515.3	2622.6	2813.3	2948.4	3012.0
45°	2376.2	2503.4	2702.1	2853.1	2920.6
47.5°	2249.1	2376.2	2590.8	2749.8	2825.3
50°	2110.0	2245.1	2471.6	2646.5	2725.9
52.5°	1974.9	2114.0	2352.4	2539.2	2618.6
55°	1827.9	1986.8	2229.2	2423.9	2507.4
57.5°	1680.9	1851.7	2102.1	2304.7	2388.2
60°	1537.8	1712.6	1974.9	2177.6	2265.0
62.5°	1394.8	1569.6	1843.8	2050.4	2133.8
65°	1243.8	1426.5	1700.7	1911.3	1994.8
67.5°	1092.8	1283.5	1557.7	1768.3	1847.7
70°	933.8	1136.5	1410.6	1617.3	1696.7
72.5°	786.8	989.4	1259.6	1462.3	1537.8
75°	639.8	842.4	1104.7	1291.4	1343.1
77.5°	496.7	699.4	933.8	1057.0	1068.9
80°	361.6	552.3	743.1	778.8	774.9
82.5°	242.4	413.3	512.6	516.6	528.5
85°	139.1	258.3	282.1	278.2	282.1
87.5°	55.6	91.4	79.5	59.6	59.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)