

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: P388399

Luminaire Tested: **24CZ2-150VHE-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: P388399
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-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: 12157.9 lumens
Efficiency: N/A
Efficacy: 116.7 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

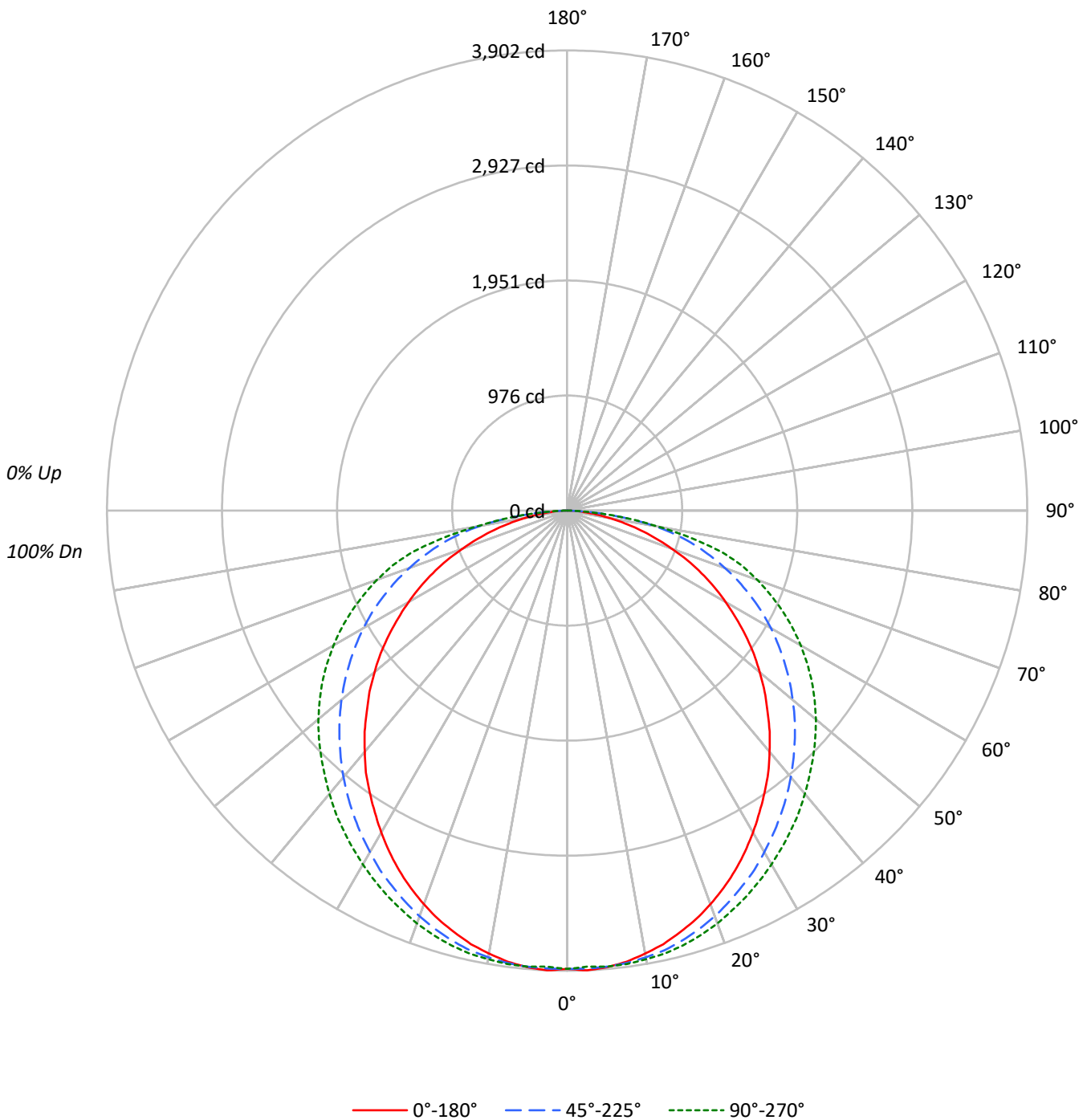
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5229	5229	5229
5°	5249	5243	5243
10°	5211	5255	5277
15°	5156	5257	5313
20°	5087	5243	5335
25°	5001	5215	5352
30°	4896	5196	5383
35°	4794	5183	5434
40°	4689	5183	5507
45°	4568	5195	5615
50°	4462	5227	5765
55°	4332	5283	5943
60°	4181	5369	6158
65°	4001	5471	6416
70°	3712	5607	6744
75°	3360	5802	7054
80°	2830	5817	6066
85°	2169	4400	4400



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.9	3.0
10°-20°	1061.4	8.7
20°-30°	1612.1	13.3
30°-40°	1960.9	16.1
40°-50°	2087.7	17.2
50°-60°	1988.5	16.4
60°-70°	1662.9	13.7
70°-80°	1108.7	9.1
80°-90°	306.8	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°	3042.4	25.0
0°-40°	5003.3	41.2
0°-60°	9079.5	74.7
0°-90°	12157.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12157.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3886	3886	3886	3886	3886	
5°	3886	3862	3882	3882	3882	369
15°	3702	3710	3774	3802	3814	1044
25°	3368	3412	3513	3573	3605	1551
35°	2919	3003	3156	3260	3308	1826
45°	2401	2529	2730	2883	2951	1856
55°	1847	2007	2252	2449	2533	1651
65°	1257	1441	1718	1931	2015	1242
75°	646	851	1116	1305	1357	685
85°	140	261	285	281	285	170
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3886.3	3886.3	3886.3	3886.3	3886.3
2.5°	3902.3	3874.2	3886.3	3886.3	3870.2
5°	3886.3	3862.2	3882.2	3882.2	3882.2
7.5°	3858.2	3838.1	3870.2	3878.2	3878.2
10°	3814.0	3806.0	3846.1	3858.2	3862.2
12.5°	3765.8	3761.8	3818.0	3834.1	3846.1
15°	3701.6	3709.6	3773.8	3801.9	3814.0
17.5°	3633.3	3649.4	3721.7	3761.8	3773.8
20°	3553.0	3577.1	3661.4	3701.6	3725.7
22.5°	3464.7	3500.8	3589.2	3637.3	3665.4
25°	3368.4	3412.5	3512.9	3573.1	3605.2
27.5°	3264.0	3320.2	3436.6	3504.9	3537.0
30°	3151.6	3215.8	3344.3	3424.6	3464.7
32.5°	3035.1	3111.4	3251.9	3340.3	3388.4
35°	2918.7	3003.0	3155.6	3260.0	3308.1
37.5°	2802.3	2886.6	3055.2	3167.6	3227.8
40°	2669.8	2770.2	2950.8	3075.3	3135.5
42.5°	2541.3	2649.7	2842.4	2978.9	3043.2
45°	2400.8	2529.3	2730.0	2882.6	2950.8
47.5°	2272.3	2400.8	2617.6	2778.2	2854.5
50°	2131.8	2268.3	2497.2	2673.8	2754.1
52.5°	1995.3	2135.8	2376.7	2565.4	2645.7
55°	1846.8	2007.4	2252.3	2449.0	2533.3
57.5°	1698.2	1870.9	2123.8	2328.5	2412.9
60°	1553.7	1730.3	1995.3	2200.1	2288.4
62.5°	1409.2	1585.8	1862.8	2071.6	2155.9
65°	1256.6	1441.3	1718.3	1931.1	2015.4
67.5°	1104.1	1296.8	1573.8	1786.6	1866.8
70°	943.5	1148.2	1425.2	1634.0	1714.3
72.5°	794.9	999.7	1272.7	1477.4	1553.7
75°	646.4	851.1	1116.1	1304.8	1357.0
77.5°	501.8	706.6	943.5	1067.9	1080.0
80°	365.3	558.0	750.8	786.9	782.9
82.5°	244.9	417.5	517.9	521.9	534.0
85°	140.5	261.0	285.0	281.0	285.0
87.5°	56.2	92.3	80.3	60.2	60.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)