

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: P388427

Luminaire Tested: **24CZ2-170VHE-SQR-UNV-L950-CD2-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: P388427  
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: 24CZ2-170VHE-SQR-UNV-L950-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14821.6 lumens  
Efficiency: N/A  
Efficacy: 120.1 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

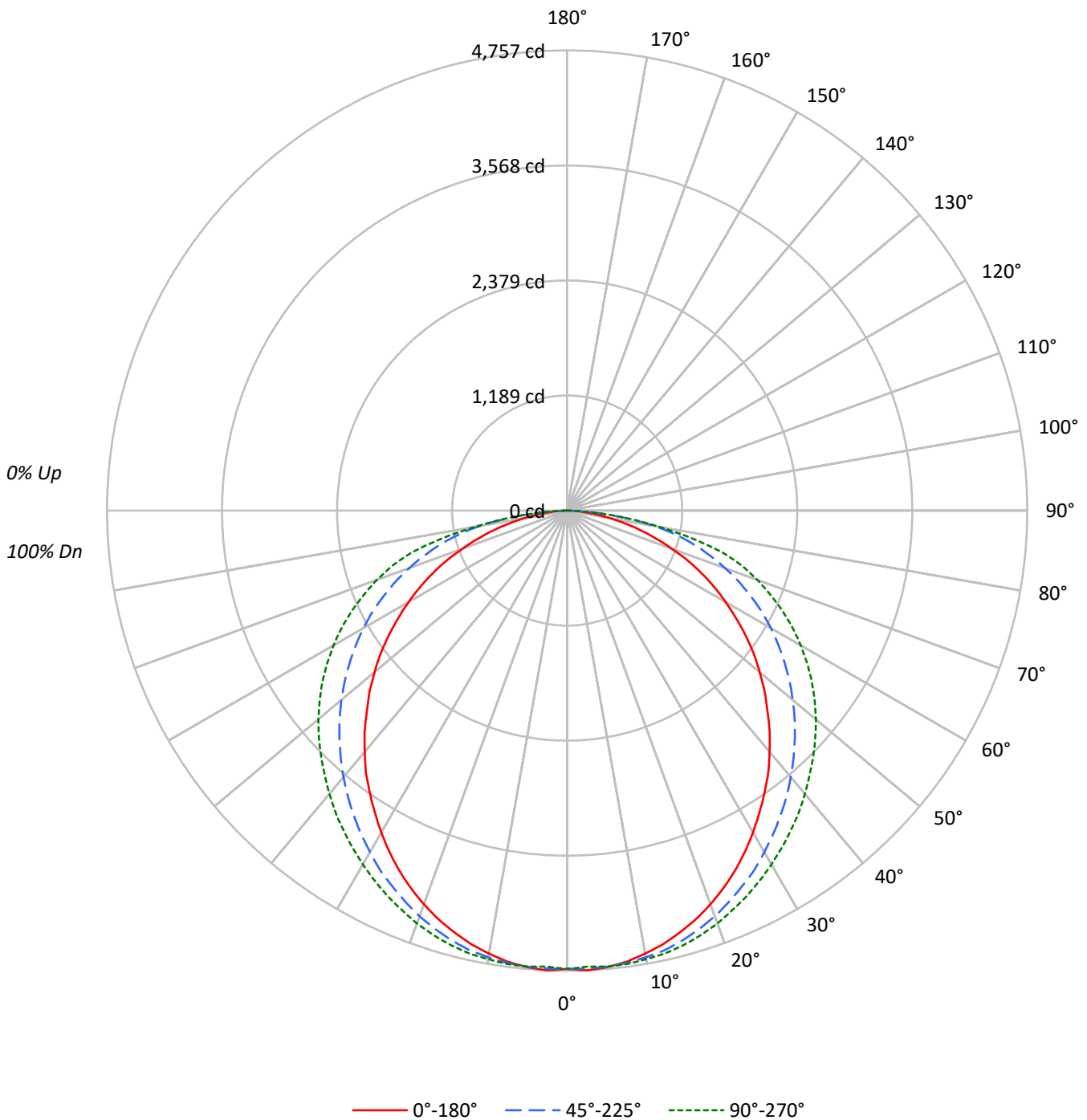
Input Watts (W): 123.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6375	6375	6375
5°	6399	6392	6392
10°	6352	6406	6433
15°	6286	6409	6477
20°	6202	6391	6503
25°	6096	6358	6525
30°	5969	6334	6562
35°	5844	6319	6624
40°	5717	6318	6714
45°	5569	6333	6845
50°	5440	6372	7028
55°	5281	6441	7245
60°	5097	6546	7507
65°	4877	6669	7822
70°	4525	6835	8222
75°	4096	7073	8600
80°	3451	7091	7395
85°	2644	5365	5365



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	449.7	3.0
10°-20°	1293.9	8.7
20°-30°	1965.3	13.3
30°-40°	2390.5	16.1
40°-50°	2545.2	17.2
50°-60°	2424.1	16.4
60°-70°	2027.3	13.7
70°-80°	1351.6	9.1
80°-90°	374.0	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°	3708.9	25.0
0°-40°	6099.5	41.2
0°-60°	11068.8	74.7
0°-90°	14821.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14821.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4738	4738	4738	4738	4738	
5°	4738	4708	4733	4733	4733	449
15°	4513	4522	4601	4635	4650	1273
25°	4106	4160	4282	4356	4395	1891
35°	3558	3661	3847	3974	4033	2227
45°	2927	3083	3328	3514	3597	2263
55°	2251	2447	2746	2986	3088	2013
65°	1532	1757	2095	2354	2457	1513
75°	788	1038	1361	1591	1654	835
85°	171	318	348	343	348	207
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4737.7	4737.7	4737.7	4737.7	4737.7
2.5°	4757.3	4723.0	4737.7	4737.7	4718.1
5°	4737.7	4708.3	4732.8	4732.8	4732.8
7.5°	4703.4	4679.0	4718.1	4727.9	4727.9
10°	4649.6	4639.8	4688.8	4703.4	4708.3
12.5°	4590.9	4586.0	4654.5	4674.1	4688.8
15°	4512.6	4522.4	4600.7	4634.9	4649.6
17.5°	4429.4	4448.9	4537.0	4586.0	4600.7
20°	4331.5	4360.8	4463.6	4512.6	4541.9
22.5°	4223.8	4267.8	4375.5	4434.3	4468.5
25°	4106.3	4160.2	4282.5	4355.9	4395.1
27.5°	3979.1	4047.6	4189.5	4272.7	4311.9
30°	3842.0	3920.4	4077.0	4174.9	4223.8
32.5°	3700.1	3793.1	3964.4	4072.1	4130.8
35°	3558.2	3661.0	3846.9	3974.2	4032.9
37.5°	3416.2	3519.0	3724.6	3861.6	3935.0
40°	3254.7	3377.1	3597.3	3749.1	3822.5
42.5°	3098.1	3230.3	3465.2	3631.6	3709.9
45°	2926.8	3083.4	3328.1	3514.1	3597.3
47.5°	2770.2	2926.8	3191.1	3386.9	3479.9
50°	2598.9	2765.3	3044.3	3259.6	3357.5
52.5°	2432.5	2603.8	2897.4	3127.5	3225.4
55°	2251.4	2447.2	2745.7	2985.5	3088.3
57.5°	2070.3	2280.8	2589.1	2838.7	2941.5
60°	1894.1	2109.5	2432.5	2682.1	2789.8
62.5°	1717.9	1933.3	2271.0	2525.5	2628.3
65°	1531.9	1757.1	2094.8	2354.2	2457.0
67.5°	1345.9	1580.9	1918.6	2178.0	2275.9
70°	1150.2	1399.8	1737.5	1992.0	2089.9
72.5°	969.1	1218.7	1551.5	1801.1	1894.1
75°	788.0	1037.6	1360.6	1590.7	1654.3
77.5°	611.8	861.4	1150.2	1301.9	1316.6
80°	445.4	680.3	915.2	959.3	954.4
82.5°	298.6	509.0	631.4	636.3	650.9
85°	171.3	318.1	347.5	342.6	347.5
87.5°	68.5	112.6	97.9	73.4	73.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)