

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: P388401

Luminaire Tested: **24CZ2-150VHE-SQR-UNV-L950-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: P388401  
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-L950-CD2-SDWPD1-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: 12749.2 lumens  
Efficiency: N/A  
Efficacy: 122.4 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

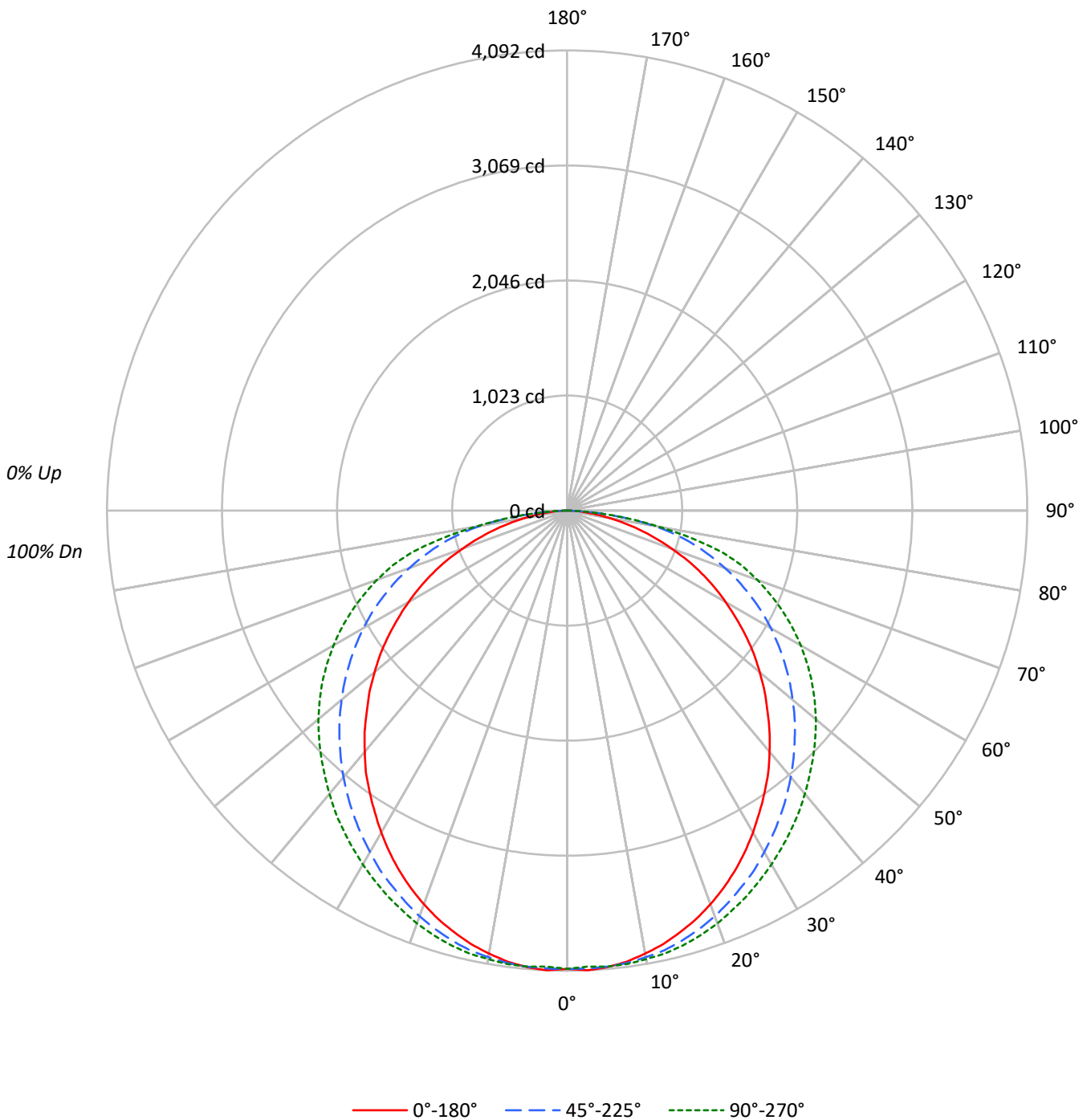
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5483	5483	5483
5°	5504	5499	5499
10°	5464	5510	5533
15°	5407	5512	5571
20°	5335	5498	5594
25°	5244	5469	5613
30°	5134	5448	5645
35°	5027	5435	5698
40°	4917	5435	5775
45°	4791	5447	5888
50°	4679	5481	6045
55°	4543	5540	6232
60°	4384	5631	6458
65°	4195	5737	6728
70°	3892	5879	7072
75°	3524	6084	7398
80°	2968	6100	6361
85°	2274	4614	4614



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	386.8	3.0
10°-20°	1113.0	8.7
20°-30°	1690.5	13.3
30°-40°	2056.3	16.1
40°-50°	2189.3	17.2
50°-60°	2085.2	16.4
60°-70°	1743.8	13.7
70°-80°	1162.6	9.1
80°-90°	321.7	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°	3190.3	25.0
0°-40°	5246.6	41.2
0°-60°	9521.1	74.7
0°-90°	12749.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12749.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4075	4075	4075	4075	4075	
5°	4075	4050	4071	4071	4071	387
15°	3882	3890	3957	3987	4000	1095
25°	3532	3578	3684	3747	3781	1626
35°	3061	3149	3309	3418	3469	1915
45°	2518	2652	2863	3023	3094	1946
55°	1937	2105	2362	2568	2656	1731
65°	1318	1511	1802	2025	2113	1302
75°	678	892	1170	1368	1423	718
85°	147	274	299	295	299	178
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4075.3	4075.3	4075.3	4075.3	4075.3
2.5°	4092.1	4062.6	4075.3	4075.3	4058.4
5°	4075.3	4050.0	4071.1	4071.1	4071.1
7.5°	4045.8	4024.7	4058.4	4066.8	4066.8
10°	3999.5	3991.1	4033.2	4045.8	4050.0
12.5°	3949.0	3944.8	4003.7	4020.5	4033.2
15°	3881.6	3890.0	3957.4	3986.9	3999.5
17.5°	3810.0	3826.9	3902.7	3944.8	3957.4
20°	3725.8	3751.1	3839.5	3881.6	3906.9
22.5°	3633.2	3671.1	3763.7	3814.2	3843.7
25°	3532.2	3578.5	3683.7	3746.9	3780.6
27.5°	3422.7	3481.7	3603.7	3675.3	3709.0
30°	3304.8	3372.2	3506.9	3591.1	3633.2
32.5°	3182.7	3262.7	3410.1	3502.7	3553.2
35°	3060.7	3149.1	3309.0	3418.5	3469.0
37.5°	2938.6	3027.0	3203.8	3321.7	3384.8
40°	2799.6	2904.9	3094.3	3224.8	3288.0
42.5°	2664.9	2778.6	2980.7	3123.8	3191.2
45°	2517.6	2652.3	2862.8	3022.8	3094.3
47.5°	2382.9	2517.6	2744.9	2913.3	2993.3
50°	2235.5	2378.6	2618.6	2803.8	2888.0
52.5°	2092.4	2239.7	2492.3	2690.2	2774.4
55°	1936.6	2105.0	2361.8	2568.1	2656.5
57.5°	1780.8	1961.9	2227.1	2441.8	2530.2
60°	1629.3	1814.5	2092.4	2307.1	2399.7
62.5°	1477.7	1662.9	1953.4	2172.4	2260.8
65°	1317.7	1511.4	1801.9	2025.0	2113.4
67.5°	1157.7	1359.8	1650.3	1873.4	1957.6
70°	989.3	1204.1	1494.5	1713.5	1797.7
72.5°	833.6	1048.3	1334.6	1549.3	1629.3
75°	677.8	892.5	1170.4	1368.2	1423.0
77.5°	526.2	741.0	989.3	1119.9	1132.5
80°	383.1	585.2	787.3	825.2	820.9
82.5°	256.8	437.8	543.1	547.3	559.9
85°	147.3	273.6	298.9	294.7	298.9
87.5°	58.9	96.8	84.2	63.1	63.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)