

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: P388679

Luminaire Tested: **24CZ2-150VHE-UNV-L930-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: P388679  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-150VHE-UNV-L930-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12381.0 lumens  
Efficiency: N/A  
Efficacy: 118.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

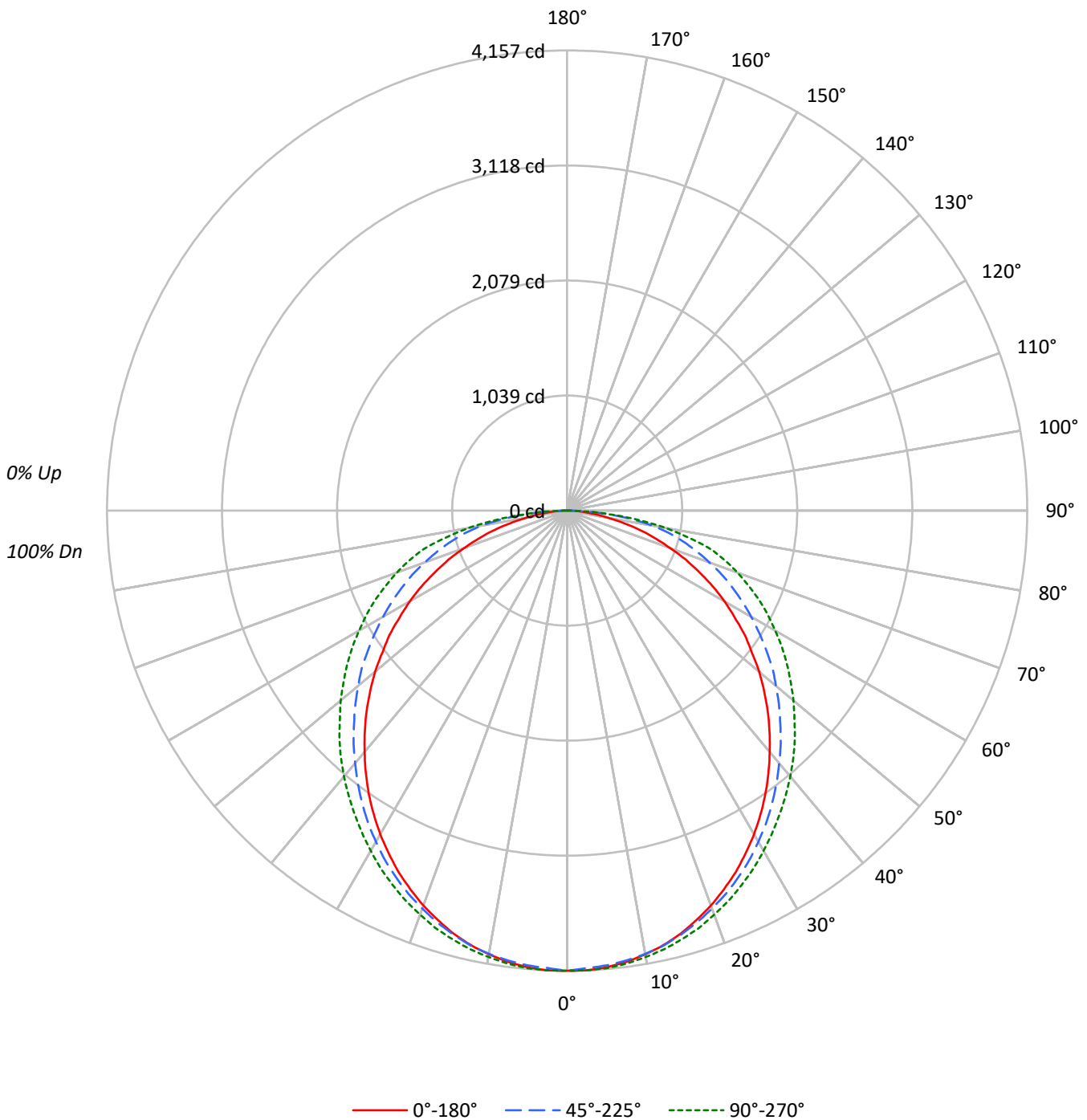
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

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

	0°	45°	90°
0°	5593	5593	5593
5°	5592	5570	5603
10°	5561	5555	5595
15°	5514	5526	5583
20°	5437	5479	5562
25°	5349	5429	5539
30°	5245	5367	5515
35°	5131	5301	5498
40°	5001	5233	5509
45°	4875	5181	5535
50°	4740	5155	5587
55°	4594	5147	5690
60°	4414	5170	5838
65°	4183	5249	6091
70°	3885	5380	6437
75°	3544	5649	6981
80°	2913	6083	6980
85°	2232	5613	5996



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	393.1	3.2
10°-20°	1122.4	9.1
20°-30°	1689.0	13.6
30°-40°	2024.1	16.3
40°-50°	2109.3	17.0
50°-60°	1962.5	15.9
60°-70°	1616.3	13.1
70°-80°	1100.8	8.9
80°-90°	363.4	2.9
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°	3204.5	25.9
0°-40°	5228.6	42.2
0°-60°	9300.4	75.1
0°-90°	12381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12381.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4157	4157	4157	4157	4157	
5°	4140	4140	4124	4144	4149	393
15°	3958	3963	3967	4004	4008	1115
25°	3603	3620	3657	3719	3731	1659
35°	3124	3161	3227	3314	3347	1953
45°	2562	2616	2723	2859	2909	1976
55°	1959	2025	2194	2368	2426	1746
65°	1314	1426	1649	1843	1913	1304
75°	682	835	1087	1281	1343	719
85°	145	281	364	388	388	179
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4156.9	4156.9	4156.9	4156.9	4156.9
2.5°	4156.9	4156.9	4136.2	4156.9	4156.9
5°	4140.3	4140.3	4123.8	4144.5	4148.6
7.5°	4111.4	4115.6	4099.0	4123.8	4128.0
10°	4070.1	4074.2	4066.0	4090.8	4094.9
12.5°	4020.5	4024.7	4024.7	4053.6	4057.7
15°	3958.5	3962.7	3966.8	4004.0	4008.1
17.5°	3880.0	3892.4	3900.7	3946.1	3954.4
20°	3797.4	3809.8	3826.3	3875.9	3884.2
22.5°	3702.3	3718.9	3747.8	3801.5	3813.9
25°	3603.2	3619.7	3656.9	3718.9	3731.3
27.5°	3491.6	3516.4	3561.9	3628.0	3644.5
30°	3375.9	3400.7	3454.4	3524.7	3549.5
32.5°	3252.0	3285.0	3347.0	3425.5	3450.3
35°	3123.9	3161.0	3227.2	3313.9	3347.0
37.5°	2987.5	3028.8	3107.3	3202.4	3243.7
40°	2847.0	2896.6	2979.2	3090.8	3136.3
42.5°	2706.5	2752.0	2855.3	2975.1	3024.7
45°	2561.9	2615.6	2723.0	2859.4	2909.0
47.5°	2413.1	2466.9	2594.9	2739.6	2785.0
50°	2264.4	2318.1	2462.7	2615.6	2669.3
52.5°	2103.2	2173.5	2338.8	2491.6	2545.4
55°	1958.6	2024.7	2194.1	2367.7	2425.5
57.5°	1793.3	1871.8	2057.8	2239.6	2301.6
60°	1640.4	1723.1	1921.4	2107.4	2169.3
62.5°	1483.4	1574.3	1785.1	1975.1	2045.4
65°	1314.0	1425.6	1648.7	1842.9	1913.2
67.5°	1161.1	1276.8	1512.3	1710.7	1772.7
70°	987.6	1128.1	1367.7	1566.1	1636.3
72.5°	838.8	979.3	1231.4	1425.6	1495.8
75°	681.8	834.7	1086.7	1280.9	1342.9
77.5°	524.8	694.2	946.2	1095.0	1115.7
80°	376.0	553.7	785.1	871.9	900.8
82.5°	264.5	425.6	578.5	636.3	652.9
85°	144.6	281.0	363.6	388.4	388.4
87.5°	62.0	119.8	144.6	148.8	152.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)