

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: P389617

Luminaire Tested: **24CZ2-150VHE-S-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: P389617  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-150VHE-S-UNV-L935-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13165.6 lumens  
Efficiency: N/A  
Efficacy: 126.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

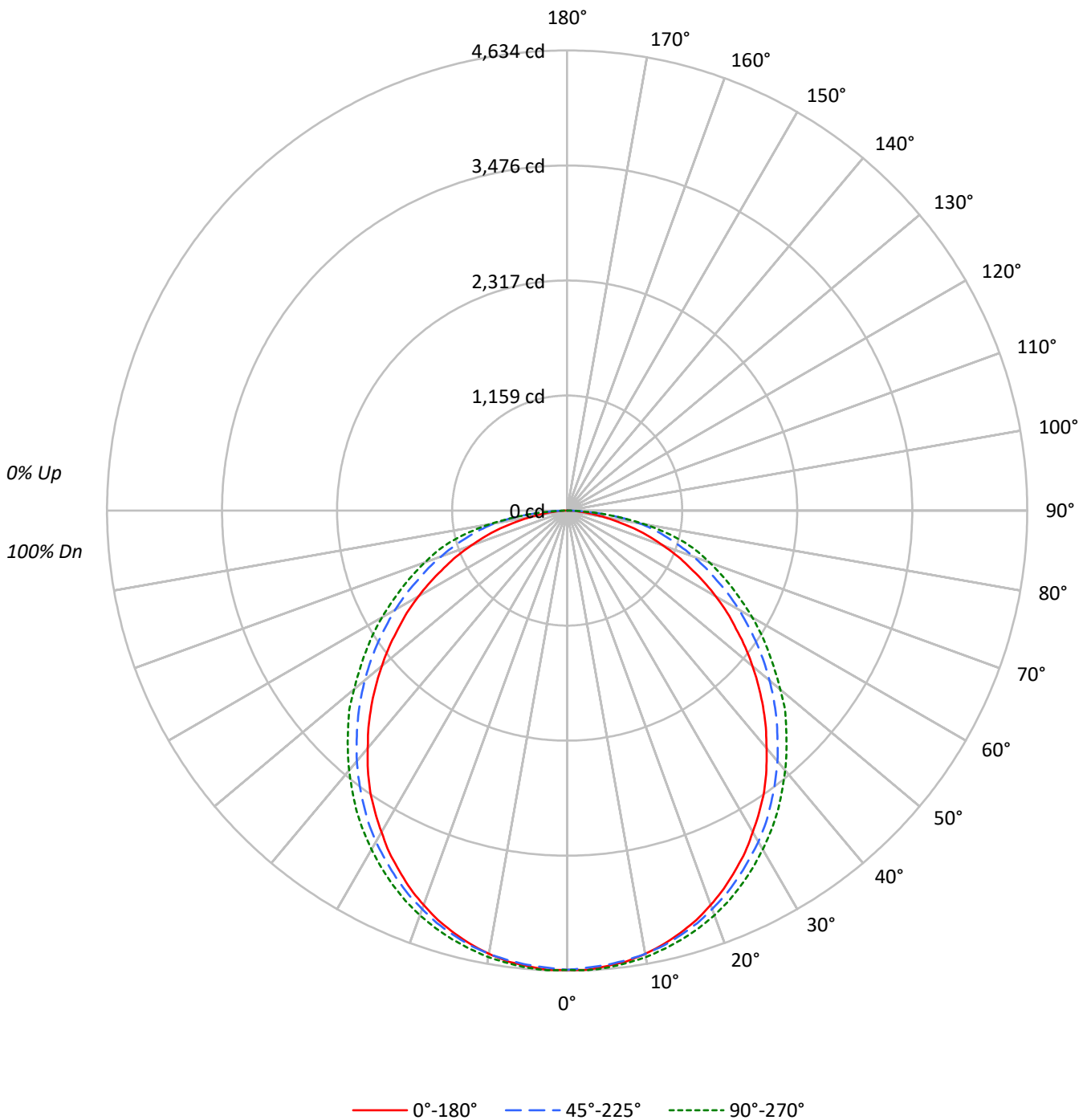
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	6223	6223	6223
5°	6219	6202	6241
10°	6193	6193	6239
15°	6134	6163	6227
20°	6054	6114	6209
25°	5941	6053	6171
30°	5808	5984	6120
35°	5681	5887	6072
40°	5487	5788	6001
45°	5308	5674	5936
50°	5103	5567	5865
55°	4875	5464	5807
60°	4648	5379	5796
65°	4354	5286	5832
70°	4031	5314	5988
75°	3609	5413	6326
80°	2916	5735	6189
85°	2195	5036	4906



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	437.9	3.3
10°-20°	1251.1	9.5
20°-30°	1880.7	14.3
30°-40°	2240.3	17.0
40°-50°	2292.8	17.4
50°-60°	2064.2	15.7
60°-70°	1621.1	12.3
70°-80°	1052.1	8.0
80°-90°	325.4	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°	3569.8	27.1
0°-40°	5810.0	44.1
0°-60°	10167.1	77.2
0°-90°	13165.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13165.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4625	4625	4625	4625	4625	
5°	4604	4613	4592	4617	4621	437
15°	4404	4416	4424	4462	4470	1242
25°	4002	4036	4077	4144	4157	1844
35°	3458	3500	3584	3672	3697	2158
45°	2789	2856	2982	3095	3120	2150
55°	2078	2170	2329	2451	2476	1863
65°	1368	1472	1660	1798	1832	1361
75°	694	828	1041	1184	1217	735
85°	142	264	326	318	318	172
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4625.2	4625.2	4625.2	4625.2	4625.2
2.5°	4629.3	4629.3	4608.4	4629.3	4633.5
5°	4604.3	4612.6	4591.7	4616.8	4621.0
7.5°	4579.2	4579.2	4566.6	4591.7	4595.9
10°	4533.2	4537.3	4533.2	4562.4	4566.6
12.5°	4474.6	4483.0	4487.2	4516.4	4520.6
15°	4403.5	4416.1	4424.4	4462.1	4470.4
17.5°	4324.1	4336.6	4357.5	4399.3	4407.7
20°	4227.9	4244.6	4269.7	4324.1	4336.6
22.5°	4123.3	4140.1	4181.9	4232.1	4253.0
25°	4002.1	4035.5	4077.3	4144.2	4156.8
27.5°	3880.8	3910.1	3964.4	4035.5	4052.2
30°	3738.6	3784.6	3851.5	3922.6	3939.3
32.5°	3600.6	3646.6	3726.1	3801.3	3822.2
35°	3458.4	3500.2	3583.9	3671.7	3696.8
37.5°	3295.3	3349.7	3441.7	3529.5	3554.6
40°	3123.9	3190.8	3295.3	3387.3	3416.6
42.5°	2960.8	3031.9	3136.4	3236.8	3270.2
45°	2789.3	2856.2	2981.7	3094.6	3119.7
47.5°	2613.7	2689.0	2822.8	2935.7	2977.5
50°	2438.0	2517.5	2659.7	2776.8	2801.9
52.5°	2262.4	2346.0	2496.6	2622.0	2634.6
55°	2078.4	2170.4	2329.3	2450.6	2475.7
57.5°	1911.1	1990.6	2162.0	2287.5	2316.8
60°	1727.1	1814.9	1998.9	2116.0	2153.7
62.5°	1551.5	1643.5	1835.8	1952.9	1986.4
65°	1367.5	1472.0	1660.2	1798.2	1831.7
67.5°	1208.6	1308.9	1509.7	1643.5	1676.9
70°	1024.6	1137.5	1350.7	1488.7	1522.2
72.5°	865.6	982.7	1196.0	1329.8	1380.0
75°	694.2	828.0	1041.3	1183.5	1216.9
77.5°	526.9	681.6	899.1	1007.8	1007.8
80°	376.4	539.5	740.2	790.4	798.7
82.5°	246.7	405.6	547.8	543.6	543.6
85°	142.2	263.5	326.2	317.8	317.8
87.5°	54.4	108.7	117.1	117.1	112.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)