

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: P389622

Luminaire Tested: **24CZ2-150VHE-S-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: P389622  
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-L950-CD2-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13948.7 lumens  
Efficiency: N/A  
Efficacy: 133.9 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

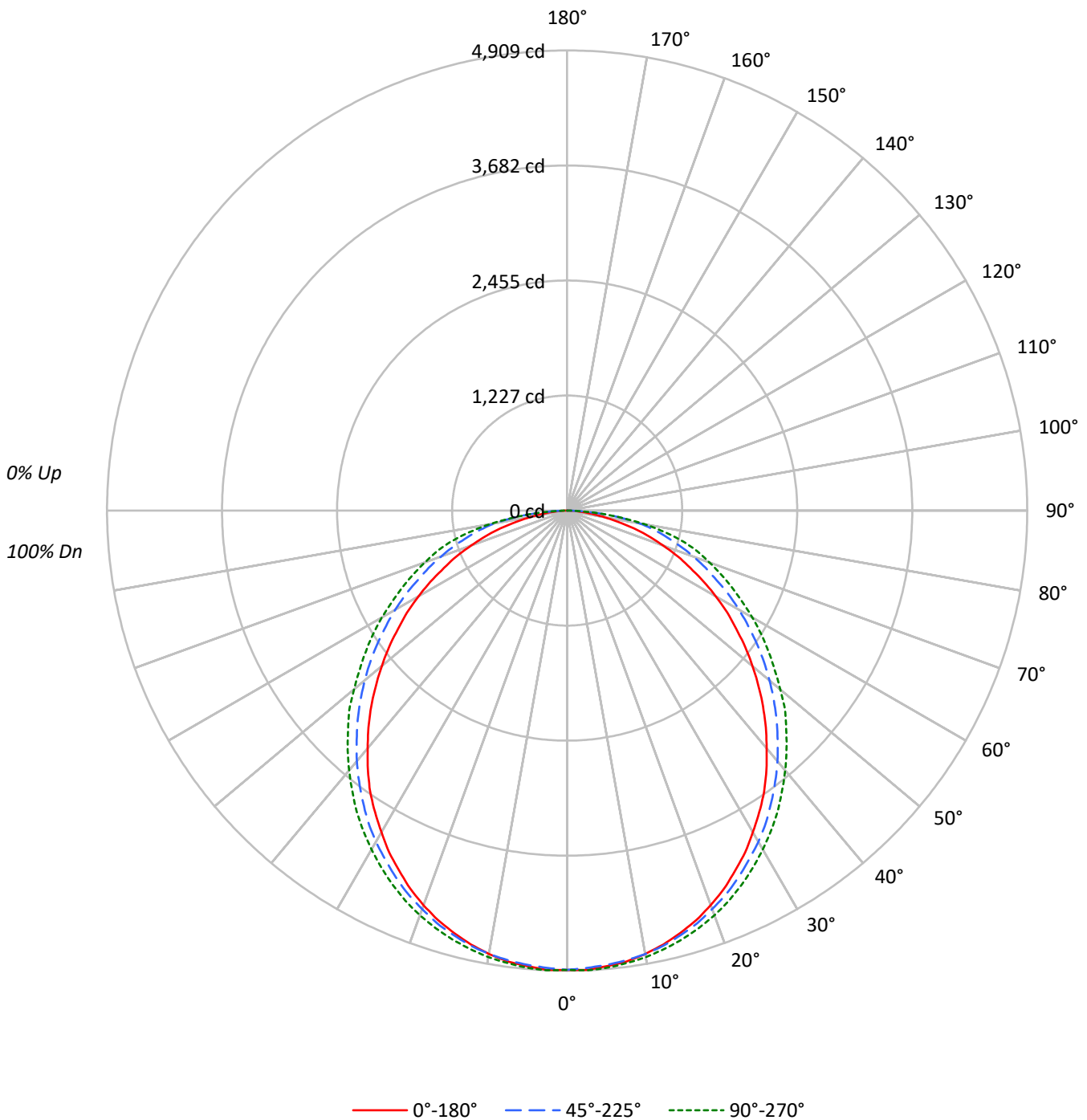
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6593	6593	6593
5°	6589	6571	6612
10°	6562	6562	6610
15°	6499	6530	6597
20°	6414	6477	6579
25°	6295	6413	6538
30°	6154	6340	6484
35°	6018	6237	6433
40°	5813	6132	6358
45°	5623	6011	6289
50°	5407	5898	6214
55°	5165	5789	6153
60°	4924	5699	6140
65°	4613	5600	6178
70°	4270	5630	6344
75°	3824	5735	6703
80°	3090	6076	6557
85°	2325	5335	5198



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	463.9	3.3
10°-20°	1325.6	9.5
20°-30°	1992.6	14.3
30°-40°	2373.5	17.0
40°-50°	2429.2	17.4
50°-60°	2187.0	15.7
60°-70°	1717.5	12.3
70°-80°	1114.7	8.0
80°-90°	344.7	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°	3782.1	27.1
0°-40°	6155.6	44.1
0°-60°	10771.8	77.2
0°-90°	13948.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13948.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4900	4900	4900	4900	4900	
5°	4878	4887	4865	4891	4896	464
15°	4665	4679	4688	4728	4736	1316
25°	4240	4276	4320	4391	4404	1953
35°	3664	3708	3797	3890	3917	2286
45°	2955	3026	3159	3279	3305	2278
55°	2202	2300	2468	2596	2623	1974
65°	1449	1560	1759	1905	1941	1442
75°	736	877	1103	1254	1289	778
85°	151	279	346	337	337	182
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4900.3	4900.3	4900.3	4900.3	4900.3
2.5°	4904.7	4904.7	4882.5	4904.7	4909.1
5°	4878.1	4887.0	4864.8	4891.4	4895.8
7.5°	4851.5	4851.5	4838.2	4864.8	4869.3
10°	4802.8	4807.2	4802.8	4833.8	4838.2
12.5°	4740.8	4749.6	4754.1	4785.1	4789.5
15°	4665.4	4678.7	4687.6	4727.5	4736.3
17.5°	4581.3	4594.6	4616.7	4661.0	4669.9
20°	4479.4	4497.1	4523.7	4581.3	4594.6
22.5°	4368.6	4386.3	4430.6	4483.8	4505.9
25°	4240.1	4275.6	4319.9	4390.7	4404.0
27.5°	4111.6	4142.6	4200.2	4275.6	4293.3
30°	3961.0	4009.7	4080.6	4155.9	4173.6
32.5°	3814.8	3863.5	3947.7	4027.4	4049.6
35°	3664.1	3708.4	3797.0	3890.1	3916.7
37.5°	3491.3	3548.9	3646.4	3739.4	3766.0
40°	3309.7	3380.6	3491.3	3588.8	3619.8
42.5°	3136.9	3212.2	3323.0	3429.3	3464.7
45°	2955.2	3026.1	3159.0	3278.7	3305.2
47.5°	2769.1	2848.9	2990.7	3110.3	3154.6
50°	2583.1	2667.2	2817.9	2941.9	2968.5
52.5°	2397.0	2485.6	2645.1	2778.0	2791.3
55°	2202.0	2299.5	2467.9	2596.3	2622.9
57.5°	2024.8	2109.0	2290.6	2423.6	2454.6
60°	1829.8	1922.9	2117.8	2241.9	2281.8
62.5°	1643.8	1741.2	1945.0	2069.1	2104.5
65°	1448.8	1559.6	1759.0	1905.2	1940.6
67.5°	1280.5	1386.8	1599.5	1741.2	1776.7
70°	1085.5	1205.1	1431.1	1577.3	1612.7
72.5°	917.1	1041.2	1267.2	1408.9	1462.1
75°	735.5	877.3	1103.2	1253.9	1289.3
77.5°	558.3	722.2	952.6	1067.8	1067.8
80°	398.8	571.6	784.2	837.4	846.2
82.5°	261.4	429.8	580.4	576.0	576.0
85°	150.6	279.1	345.6	336.7	336.7
87.5°	57.6	115.2	124.1	124.1	119.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)