

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: P389621

Luminaire Tested: **24CZ2-150VHE-S-UNV-L940-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: P389621  
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-L940-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

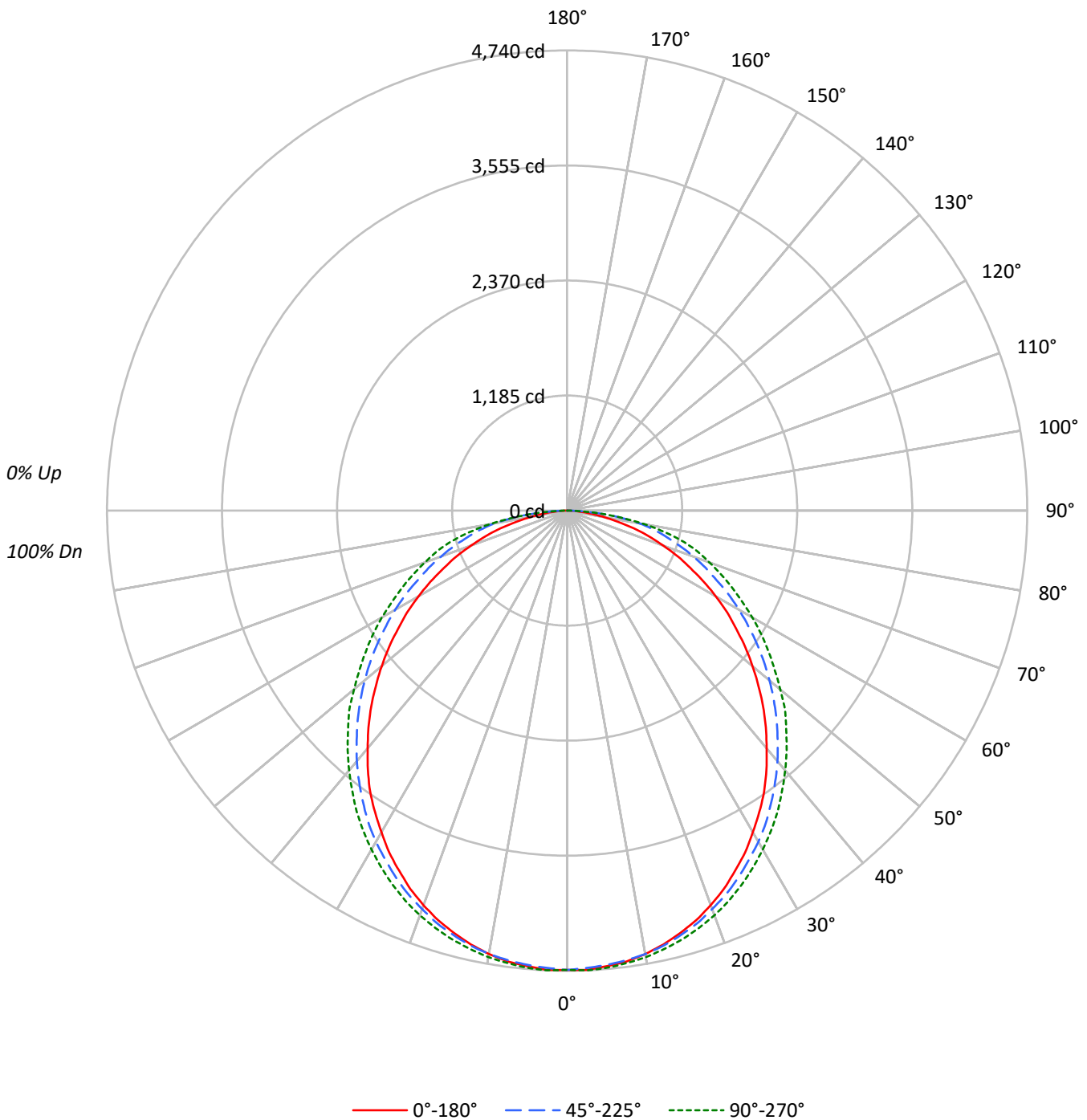
Lumens per Lamp: N/A  
Luminaire Lumens: 13468.9 lumens  
Efficiency: N/A  
Efficacy: 129.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): 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



TEST NUMBER: P389621

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L940-CD2-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389621

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L940-CD2-U

**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°	6366	6366	6366
5°	6362	6345	6385
10°	6336	6336	6383
15°	6275	6305	6371
20°	6193	6254	6352
25°	6078	6193	6313
30°	5942	6122	6261
35°	5811	6022	6212
40°	5613	5921	6139
45°	5430	5804	6073
50°	5221	5695	6000
55°	4988	5590	5941
60°	4755	5503	5929
65°	4454	5408	5966
70°	4124	5436	6126
75°	3692	5538	6472
80°	2983	5867	6331
85°	2246	5152	5019



TEST NUMBER: P389621

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L940-CD2-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	448.0	3.3
10°-20°	1280.0	9.5
20°-30°	1924.1	14.3
30°-40°	2291.9	17.0
40°-50°	2345.6	17.4
50°-60°	2111.7	15.7
60°-70°	1658.4	12.3
70°-80°	1076.4	8.0
80°-90°	332.9	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°	3652.0	27.1
0°-40°	5943.9	44.1
0°-60°	10401.3	77.2
0°-90°	13468.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13468.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4732	4732	4732	4732	4732	
5°	4710	4719	4698	4723	4727	448
15°	4505	4518	4526	4565	4573	1270
25°	4094	4128	4171	4240	4253	1886
35°	3538	3581	3666	3756	3782	2207
45°	2854	2922	3050	3166	3192	2200
55°	2126	2220	2383	2507	2533	1906
65°	1399	1506	1698	1840	1874	1393
75°	710	847	1065	1211	1245	752
85°	146	270	334	325	325	176
90°	0	0	0	0	0	



TEST NUMBER: P389621

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L940-CD2-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4731.7	4731.7	4731.7	4731.7	4731.7
2.5°	4736.0	4736.0	4714.6	4736.0	4740.3
5°	4710.3	4718.9	4697.5	4723.2	4727.4
7.5°	4684.7	4684.7	4671.8	4697.5	4701.8
10°	4637.6	4641.9	4637.6	4667.5	4671.8
12.5°	4577.7	4586.3	4590.5	4620.5	4624.8
15°	4505.0	4517.8	4526.4	4564.9	4573.4
17.5°	4423.7	4436.5	4457.9	4500.7	4509.2
20°	4325.3	4342.4	4368.1	4423.7	4436.5
22.5°	4218.3	4235.4	4278.2	4329.6	4351.0
25°	4094.3	4128.5	4171.3	4239.7	4252.6
27.5°	3970.2	4000.1	4055.8	4128.5	4145.6
30°	3824.7	3871.8	3940.2	4013.0	4030.1
32.5°	3683.5	3730.6	3811.9	3888.9	3910.3
35°	3538.1	3580.9	3666.4	3756.3	3781.9
37.5°	3371.2	3426.9	3521.0	3610.8	3636.5
40°	3195.8	3264.3	3371.2	3465.4	3495.3
42.5°	3029.0	3101.7	3208.7	3311.3	3345.6
45°	2853.6	2922.0	3050.4	3165.9	3191.6
47.5°	2673.9	2750.9	2887.8	3003.3	3046.1
50°	2494.2	2575.5	2720.9	2840.7	2866.4
52.5°	2314.5	2400.1	2554.1	2682.4	2695.3
55°	2126.3	2220.4	2383.0	2507.0	2532.7
57.5°	1955.1	2036.4	2211.8	2340.2	2370.1
60°	1766.9	1856.7	2045.0	2164.8	2203.3
62.5°	1587.2	1681.3	1878.1	1997.9	2032.2
65°	1399.0	1505.9	1698.5	1839.6	1873.9
67.5°	1236.4	1339.1	1544.4	1681.3	1715.6
70°	1048.2	1163.7	1381.9	1523.0	1557.3
72.5°	885.6	1005.4	1223.6	1360.5	1411.8
75°	710.2	847.1	1065.3	1210.7	1245.0
77.5°	539.1	697.4	919.8	1031.1	1031.1
80°	385.0	551.9	757.2	808.6	817.1
82.5°	252.4	415.0	560.4	556.2	556.2
85°	145.5	269.5	333.7	325.1	325.1
87.5°	55.6	111.2	119.8	119.8	115.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)