

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: P388684

Luminaire Tested: **24CZ2-150VHE-UNV-L940-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: P388684  
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-L940-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12659.5 lumens  
Efficiency: N/A  
Efficacy: 121.5 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

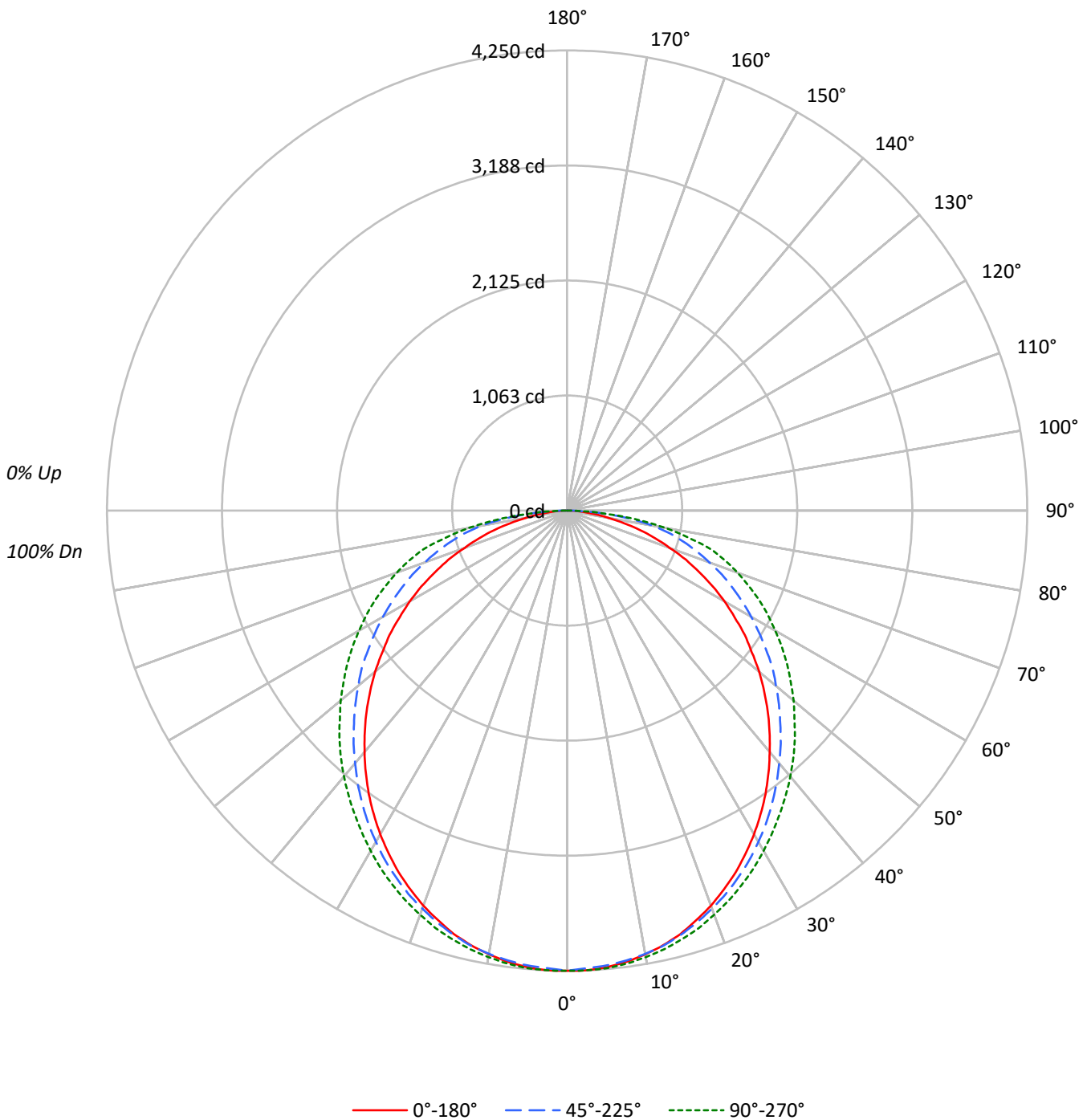
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5719	5719	5719
5°	5718	5695	5729
10°	5686	5680	5720
15°	5638	5650	5709
20°	5560	5602	5687
25°	5470	5551	5664
30°	5363	5488	5639
35°	5246	5420	5621
40°	5113	5350	5632
45°	4984	5298	5660
50°	4846	5271	5713
55°	4698	5263	5818
60°	4514	5287	5969
65°	4278	5367	6228
70°	3973	5502	6582
75°	3624	5777	7138
80°	2979	6220	7137
85°	2283	5740	6132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	402.0	3.2
10°-20°	1147.6	9.1
20°-30°	1727.0	13.6
30°-40°	2069.6	16.3
40°-50°	2156.8	17.0
50°-60°	2006.6	15.9
60°-70°	1652.7	13.1
70°-80°	1125.6	8.9
80°-90°	371.6	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°	3276.6	25.9
0°-40°	5346.3	42.2
0°-60°	9509.6	75.1
0°-90°	12659.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12659.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4250	4250	4250	4250	4250	
5°	4234	4234	4217	4238	4242	402
15°	4048	4052	4056	4094	4098	1140
25°	3684	3701	3739	3802	3815	1696
35°	3194	3232	3300	3388	3422	1997
45°	2620	2674	2784	2924	2974	2020
55°	2003	2070	2244	2421	2480	1785
65°	1344	1458	1686	1884	1956	1334
75°	697	854	1111	1310	1373	735
85°	148	287	372	397	397	183
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4250.4	4250.4	4250.4	4250.4	4250.4
2.5°	4250.4	4250.4	4229.3	4250.4	4250.4
5°	4233.5	4233.5	4216.6	4237.7	4241.9
7.5°	4203.9	4208.1	4191.2	4216.6	4220.8
10°	4161.7	4165.9	4157.4	4182.8	4187.0
12.5°	4111.0	4115.2	4115.2	4144.8	4149.0
15°	4047.6	4051.8	4056.0	4094.1	4098.3
17.5°	3967.3	3980.0	3988.4	4034.9	4043.4
20°	3882.8	3895.5	3912.4	3963.1	3971.5
22.5°	3785.6	3802.5	3832.1	3887.0	3899.7
25°	3684.2	3701.1	3739.2	3802.5	3815.2
27.5°	3570.2	3595.5	3642.0	3709.6	3726.5
30°	3451.9	3477.2	3532.1	3604.0	3629.3
32.5°	3325.1	3358.9	3422.3	3502.6	3527.9
35°	3194.1	3232.2	3299.8	3388.5	3422.3
37.5°	3054.7	3096.9	3177.2	3274.4	3316.7
40°	2911.0	2961.7	3046.2	3160.3	3206.8
42.5°	2767.4	2813.9	2919.5	3042.0	3092.7
45°	2619.5	2674.4	2784.3	2923.7	2974.4
47.5°	2467.4	2522.3	2653.3	2801.2	2847.7
50°	2315.3	2370.2	2518.1	2674.4	2729.4
52.5°	2150.5	2222.4	2391.4	2547.7	2602.6
55°	2002.7	2070.3	2243.5	2420.9	2480.1
57.5°	1833.7	1913.9	2104.1	2290.0	2353.3
60°	1677.3	1761.8	1964.6	2154.8	2218.1
62.5°	1516.8	1609.7	1825.2	2019.6	2091.4
65°	1343.6	1457.6	1685.8	1884.4	1956.2
67.5°	1187.2	1305.5	1546.4	1749.2	1812.5
70°	1009.8	1153.4	1398.5	1601.3	1673.1
72.5°	857.7	1001.3	1259.1	1457.6	1529.5
75°	697.1	853.5	1111.2	1309.8	1373.1
77.5°	536.6	709.8	967.5	1119.6	1140.8
80°	384.5	566.2	802.8	891.5	921.1
82.5°	270.4	435.2	591.5	650.7	667.6
85°	147.9	287.3	371.8	397.2	397.2
87.5°	63.4	122.5	147.9	152.1	156.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)