

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: P389618

Luminaire Tested: **24CZ2-150VHE-S-UNV-L935-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: P389618  
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-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

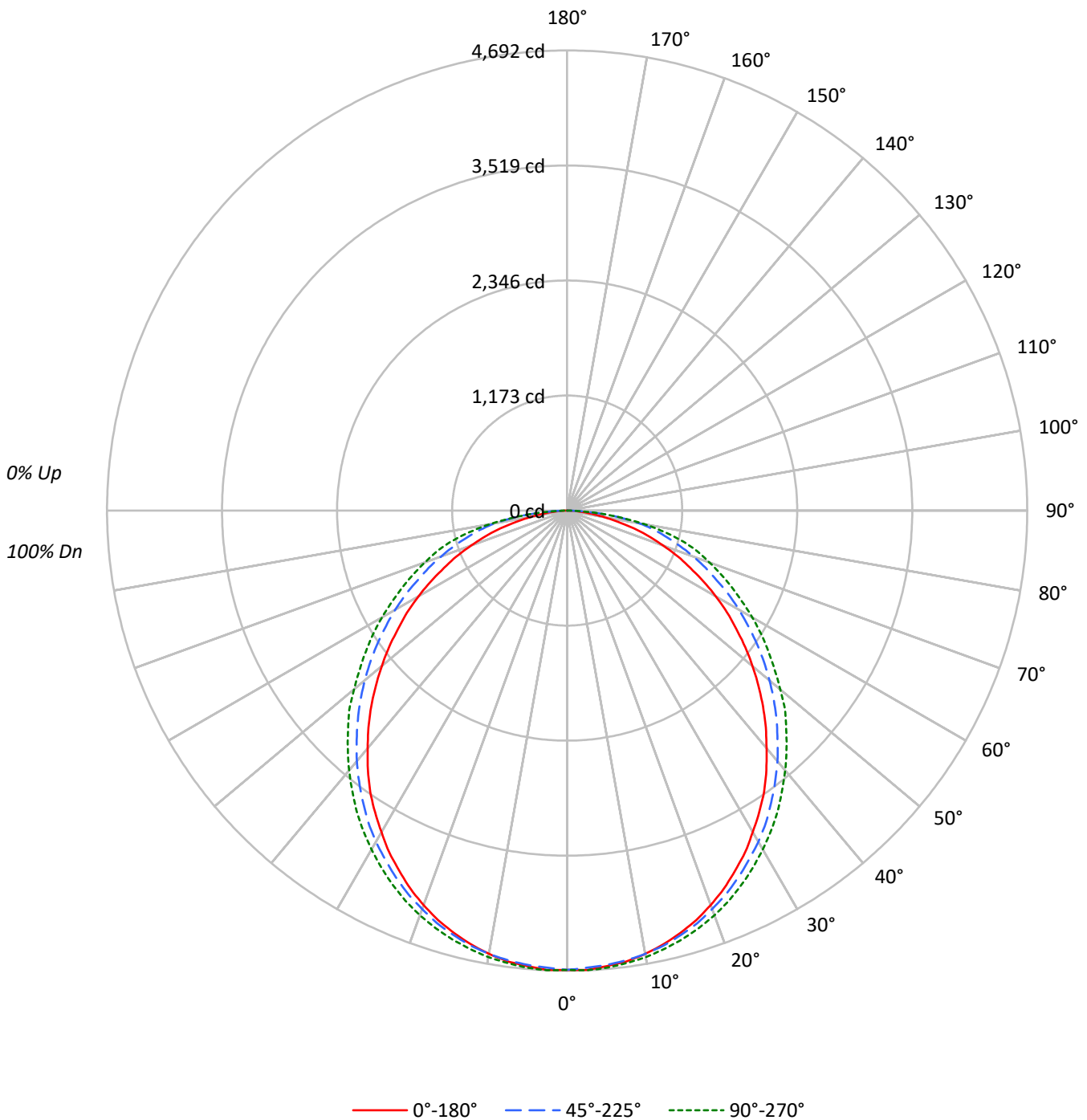
Lumens per Lamp: N/A  
Luminaire Lumens: 13331.0 lumens  
Efficiency: N/A  
Efficacy: 127.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): 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°	6301	6301	6301
5°	6297	6280	6320
10°	6271	6271	6318
15°	6211	6240	6305
20°	6130	6190	6287
25°	6016	6129	6249
30°	5881	6059	6197
35°	5752	5961	6148
40°	5556	5861	6076
45°	5374	5745	6011
50°	5168	5637	5939
55°	4937	5533	5880
60°	4706	5447	5868
65°	4408	5352	5905
70°	4081	5380	6063
75°	3654	5481	6406
80°	2953	5807	6267
85°	2223	5099	4968



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	443.4	3.3
10°-20°	1266.9	9.5
20°-30°	1904.4	14.3
30°-40°	2268.4	17.0
40°-50°	2321.6	17.4
50°-60°	2090.1	15.7
60°-70°	1641.4	12.3
70°-80°	1065.3	8.0
80°-90°	329.5	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°	3614.6	27.1
0°-40°	5883.0	44.1
0°-60°	10294.8	77.2
0°-90°	13331.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13331.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4683	4683	4683	4683	4683	
5°	4662	4671	4649	4675	4679	443
15°	4459	4472	4480	4518	4527	1257
25°	4052	4086	4129	4196	4209	1867
35°	3502	3544	3629	3718	3743	2185
45°	2824	2892	3019	3134	3159	2177
55°	2104	2198	2359	2481	2507	1887
65°	1385	1490	1681	1821	1855	1378
75°	703	838	1054	1198	1232	744
85°	144	267	330	322	322	174
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4683.3	4683.3	4683.3	4683.3	4683.3
2.5°	4687.5	4687.5	4666.3	4687.5	4691.7
5°	4662.1	4670.6	4649.4	4674.8	4679.0
7.5°	4636.7	4636.7	4624.0	4649.4	4653.6
10°	4590.1	4594.3	4590.1	4619.8	4624.0
12.5°	4530.8	4539.3	4543.5	4573.2	4577.4
15°	4458.8	4471.5	4480.0	4518.1	4526.6
17.5°	4378.4	4391.1	4412.3	4454.6	4463.1
20°	4281.0	4297.9	4323.3	4378.4	4391.1
22.5°	4175.1	4192.1	4234.4	4285.2	4306.4
25°	4052.3	4086.2	4128.6	4196.3	4209.0
27.5°	3929.5	3959.2	4014.2	4086.2	4103.2
30°	3785.6	3832.1	3899.9	3971.9	3988.8
32.5°	3645.8	3692.4	3772.9	3849.1	3870.3
35°	3501.9	3544.2	3628.9	3717.8	3743.2
37.5°	3336.7	3391.8	3484.9	3573.8	3599.3
40°	3163.1	3230.9	3336.7	3429.9	3459.5
42.5°	2998.0	3070.0	3175.8	3277.4	3311.3
45°	2824.4	2892.1	3019.1	3133.5	3158.9
47.5°	2646.5	2722.7	2858.2	2972.6	3014.9
50°	2468.7	2549.1	2693.1	2811.7	2837.1
52.5°	2290.8	2375.5	2527.9	2655.0	2667.7
55°	2104.5	2197.7	2358.6	2481.4	2506.8
57.5°	1935.1	2015.6	2189.2	2316.2	2345.9
60°	1748.8	1837.7	2024.1	2142.6	2180.7
62.5°	1571.0	1664.1	1858.9	1977.5	2011.3
65°	1384.7	1490.5	1681.1	1820.8	1854.7
67.5°	1223.7	1325.4	1528.6	1664.1	1698.0
70°	1037.4	1151.8	1367.7	1507.5	1541.3
72.5°	876.5	995.1	1211.0	1346.5	1397.4
75°	702.9	838.4	1054.4	1198.3	1232.2
77.5°	533.5	690.2	910.4	1020.5	1020.5
80°	381.1	546.2	749.5	800.3	808.8
82.5°	249.8	410.7	554.7	550.5	550.5
85°	144.0	266.8	330.3	321.8	321.8
87.5°	55.0	110.1	118.6	118.6	114.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)