

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: P391104

Luminaire Tested: **24CZ2-150VHE-RDP-UNV-L935-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: P391104  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-150VHE-RDP-UNV-L935-CD2-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

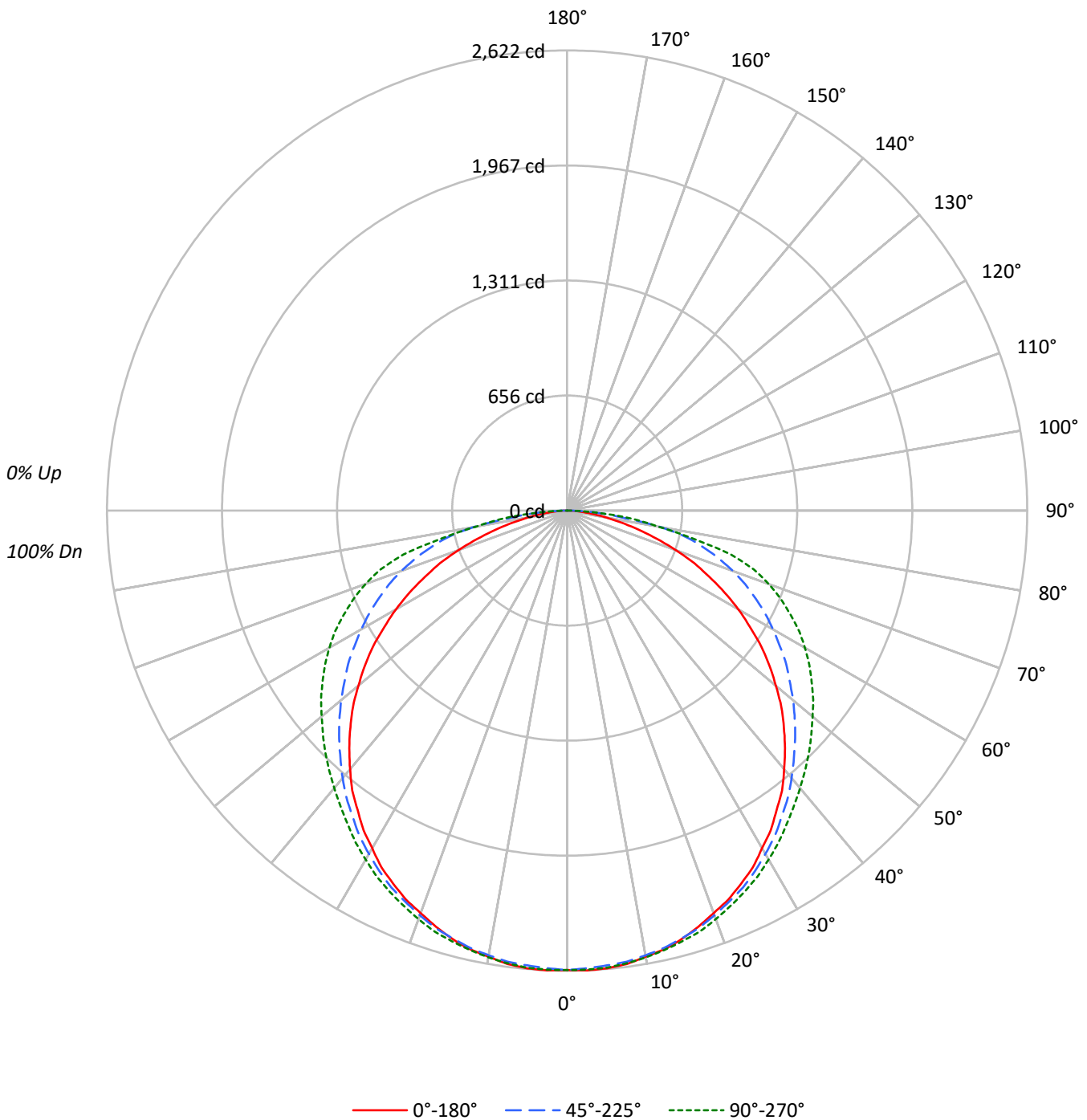
Lumens per Lamp: N/A  
Luminaire Lumens: 8325.5 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	3523	3523	3523
5°	3536	3514	3531
10°	3526	3515	3532
15°	3520	3515	3538
20°	3495	3512	3548
25°	3482	3519	3556
30°	3452	3510	3567
35°	3419	3500	3581
40°	3380	3496	3627
45°	3324	3497	3709
50°	3250	3518	3821
55°	3168	3575	3991
60°	3034	3645	4212
65°	2840	3773	4470
70°	2583	3948	4808
75°	2190	4165	5023
80°	1728	4192	4064
85°	1275	3188	3571



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.4	3.0
10°-20°	714.8	8.6
20°-30°	1093.0	13.1
30°-40°	1336.2	16.0
40°-50°	1424.1	17.1
50°-60°	1361.7	16.4
60°-70°	1153.5	13.9
70°-80°	775.2	9.3
80°-90°	218.7	2.6
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°	2056.1	24.7
0°-40°	3392.3	40.7
0°-60°	6178.1	74.2
0°-90°	8325.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8325.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2618	2618	2618	2618	2618	
5°	2618	2614	2602	2614	2614	249
15°	2527	2527	2523	2544	2540	713
25°	2346	2354	2370	2391	2395	1081
35°	2081	2098	2131	2172	2180	1304
45°	1747	1776	1838	1916	1949	1347
55°	1350	1400	1524	1644	1701	1203
65°	892	983	1185	1342	1404	886
75°	421	574	801	937	966	451
85°	83	169	206	223	231	102
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2618.1	2618.1	2618.1	2618.1	2618.1
2.5°	2622.3	2622.3	2609.9	2618.1	2618.1
5°	2618.1	2614.0	2601.6	2614.0	2614.0
7.5°	2605.7	2601.6	2593.4	2605.7	2601.6
10°	2581.0	2581.0	2572.7	2585.1	2585.1
12.5°	2560.3	2556.2	2552.1	2568.6	2564.4
15°	2527.3	2527.3	2523.2	2543.8	2539.7
17.5°	2486.0	2490.1	2494.2	2510.8	2514.9
20°	2440.6	2448.8	2453.0	2477.7	2477.7
22.5°	2399.3	2403.4	2411.7	2436.4	2436.4
25°	2345.6	2353.8	2370.4	2391.0	2395.1
27.5°	2291.9	2296.0	2316.7	2345.6	2349.7
30°	2221.7	2234.1	2258.9	2291.9	2296.0
32.5°	2159.8	2172.1	2201.0	2234.1	2242.3
35°	2081.3	2097.8	2130.8	2172.1	2180.4
37.5°	2011.1	2023.5	2064.8	2110.2	2122.6
40°	1924.4	1949.1	1990.4	2044.1	2064.8
42.5°	1837.6	1862.4	1912.0	1982.2	2007.0
45°	1746.8	1775.7	1837.6	1916.1	1949.1
47.5°	1655.9	1689.0	1759.2	1850.0	1887.2
50°	1552.7	1594.0	1680.7	1784.0	1825.3
52.5°	1453.6	1503.2	1598.1	1713.8	1767.4
55°	1350.4	1399.9	1523.8	1643.6	1701.4
57.5°	1234.7	1300.8	1437.1	1573.4	1635.3
60°	1127.4	1189.3	1354.5	1503.2	1565.1
62.5°	1011.7	1094.3	1271.9	1428.8	1490.8
65°	892.0	982.8	1185.2	1342.1	1404.0
67.5°	784.6	883.7	1098.5	1255.4	1317.3
70°	656.6	780.5	1003.5	1160.4	1222.3
72.5°	536.8	673.1	904.4	1057.2	1115.0
75°	421.2	574.0	801.1	937.4	966.3
77.5°	313.8	474.9	693.8	751.6	730.9
80°	223.0	379.9	541.0	512.1	524.5
82.5°	144.5	289.1	334.5	379.9	392.3
85°	82.6	169.3	206.5	223.0	231.3
87.5°	37.2	61.9	82.6	82.6	78.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)