

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: P391061

Luminaire Tested: **24CZ2-130VHE-RDP-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: P391061  
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: 24CZ2-130VHE-RDP-UNV-L940-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7624.5 lumens  
Efficiency: N/A  
Efficacy: 84.1 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

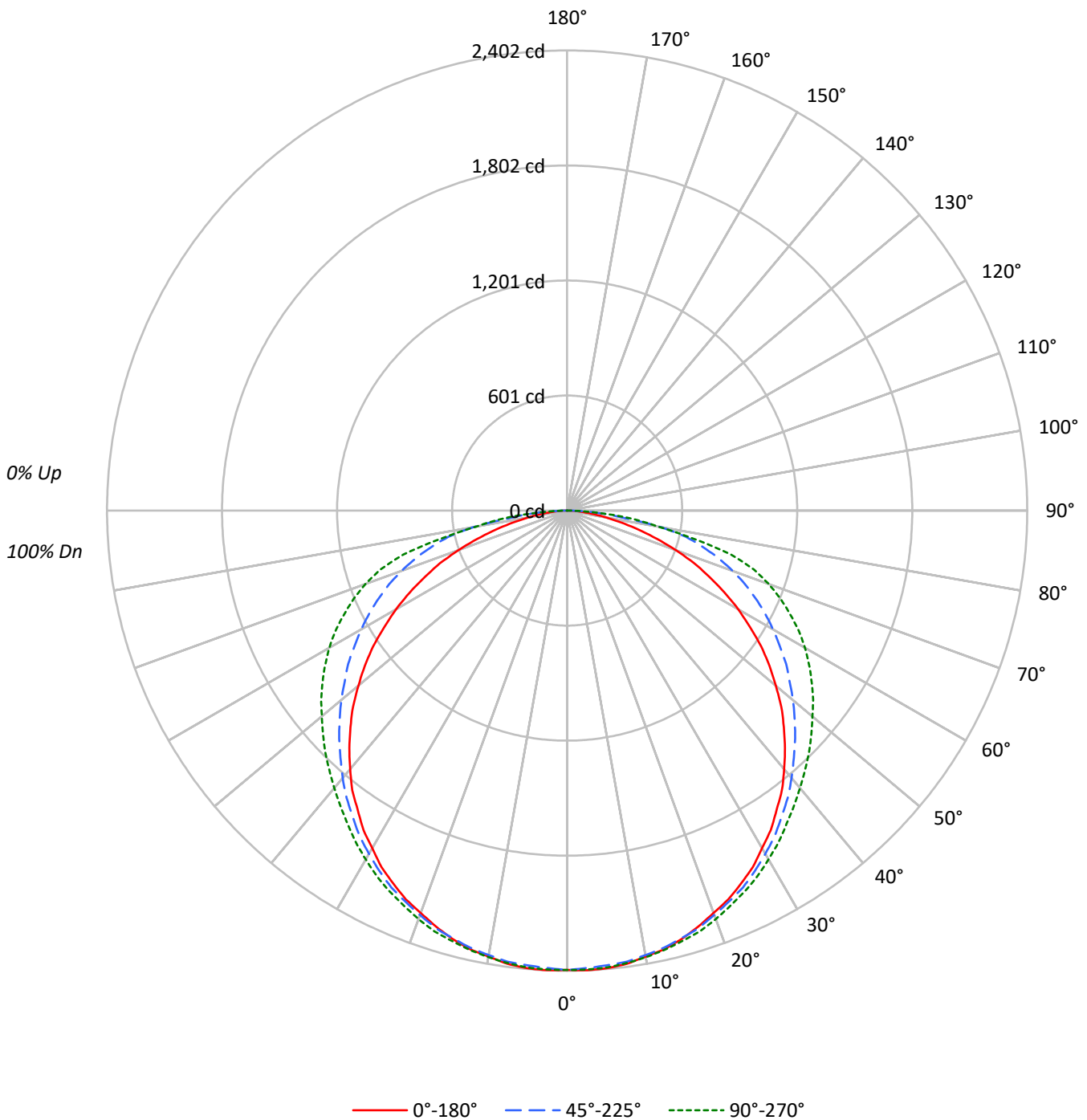
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3226	3226	3226
5°	3238	3218	3233
10°	3229	3219	3234
15°	3224	3219	3240
20°	3200	3216	3249
25°	3189	3223	3256
30°	3161	3214	3267
35°	3131	3205	3280
40°	3095	3202	3321
45°	3044	3202	3397
50°	2977	3222	3499
55°	2901	3274	3655
60°	2778	3338	3857
65°	2601	3456	4094
70°	2365	3615	4404
75°	2005	3814	4601
80°	1582	3839	3722
85°	1167	2919	3270



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.4	3.0
10°-20°	654.6	8.6
20°-30°	1001.0	13.1
30°-40°	1223.7	16.0
40°-50°	1304.2	17.1
50°-60°	1247.0	16.4
60°-70°	1056.4	13.9
70°-80°	710.0	9.3
80°-90°	200.3	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°	1883.0	24.7
0°-40°	3106.7	40.7
0°-60°	5657.9	74.2
0°-90°	7624.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7624.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2398	2398	2398	2398	2398	
5°	2398	2394	2383	2394	2394	228
15°	2314	2314	2311	2330	2326	653
25°	2148	2156	2171	2190	2194	990
35°	1906	1921	1951	1989	1997	1194
45°	1600	1626	1683	1755	1785	1234
55°	1237	1282	1396	1505	1558	1101
65°	817	900	1085	1229	1286	811
75°	386	526	734	858	885	413
85°	76	155	189	204	212	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2397.7	2397.7	2397.7	2397.7	2397.7
2.5°	2401.5	2401.5	2390.1	2397.7	2397.7
5°	2397.7	2393.9	2382.6	2393.9	2393.9
7.5°	2386.3	2382.6	2375.0	2386.3	2382.6
10°	2363.7	2363.7	2356.1	2367.4	2367.4
12.5°	2344.7	2341.0	2337.2	2352.3	2348.5
15°	2314.5	2314.5	2310.7	2329.6	2325.8
17.5°	2276.7	2280.5	2284.2	2299.4	2303.1
20°	2235.1	2242.6	2246.4	2269.1	2269.1
22.5°	2197.2	2201.0	2208.6	2231.3	2231.3
25°	2148.1	2155.6	2170.8	2189.7	2193.5
27.5°	2098.9	2102.7	2121.6	2148.1	2151.9
30°	2034.6	2046.0	2068.7	2098.9	2102.7
32.5°	1977.9	1989.2	2015.7	2046.0	2053.5
35°	1906.0	1921.2	1951.4	1989.2	1996.8
37.5°	1841.8	1853.1	1890.9	1932.5	1943.9
40°	1762.3	1785.0	1822.8	1872.0	1890.9
42.5°	1682.9	1705.6	1751.0	1815.3	1838.0
45°	1599.7	1626.2	1682.9	1754.8	1785.0
47.5°	1516.5	1546.8	1611.1	1694.3	1728.3
50°	1422.0	1459.8	1539.2	1633.8	1671.6
52.5°	1331.2	1376.6	1463.6	1569.5	1618.6
55°	1236.7	1282.0	1395.5	1505.2	1558.1
57.5°	1130.8	1191.3	1316.1	1440.9	1497.6
60°	1032.4	1089.2	1240.4	1376.6	1433.3
62.5°	926.6	1002.2	1164.8	1308.5	1365.2
65°	816.9	900.1	1085.4	1229.1	1285.8
67.5°	718.5	809.3	1006.0	1149.7	1206.4
70°	601.3	714.8	919.0	1062.7	1119.4
72.5°	491.6	616.4	828.2	968.2	1021.1
75°	385.7	525.7	733.7	858.5	885.0
77.5°	287.4	434.9	635.3	688.3	669.4
80°	204.2	347.9	495.4	468.9	480.3
82.5°	132.4	264.7	306.3	347.9	359.3
85°	75.6	155.1	189.1	204.2	211.8
87.5°	34.0	56.7	75.6	75.6	71.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)