

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: P391040

Luminaire Tested: **24CZ2-130VHE-HRP-UNV-L950-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: P391040  
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-HRP-UNV-L950-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10213.9 lumens  
Efficiency: N/A  
Efficacy: 112.6 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

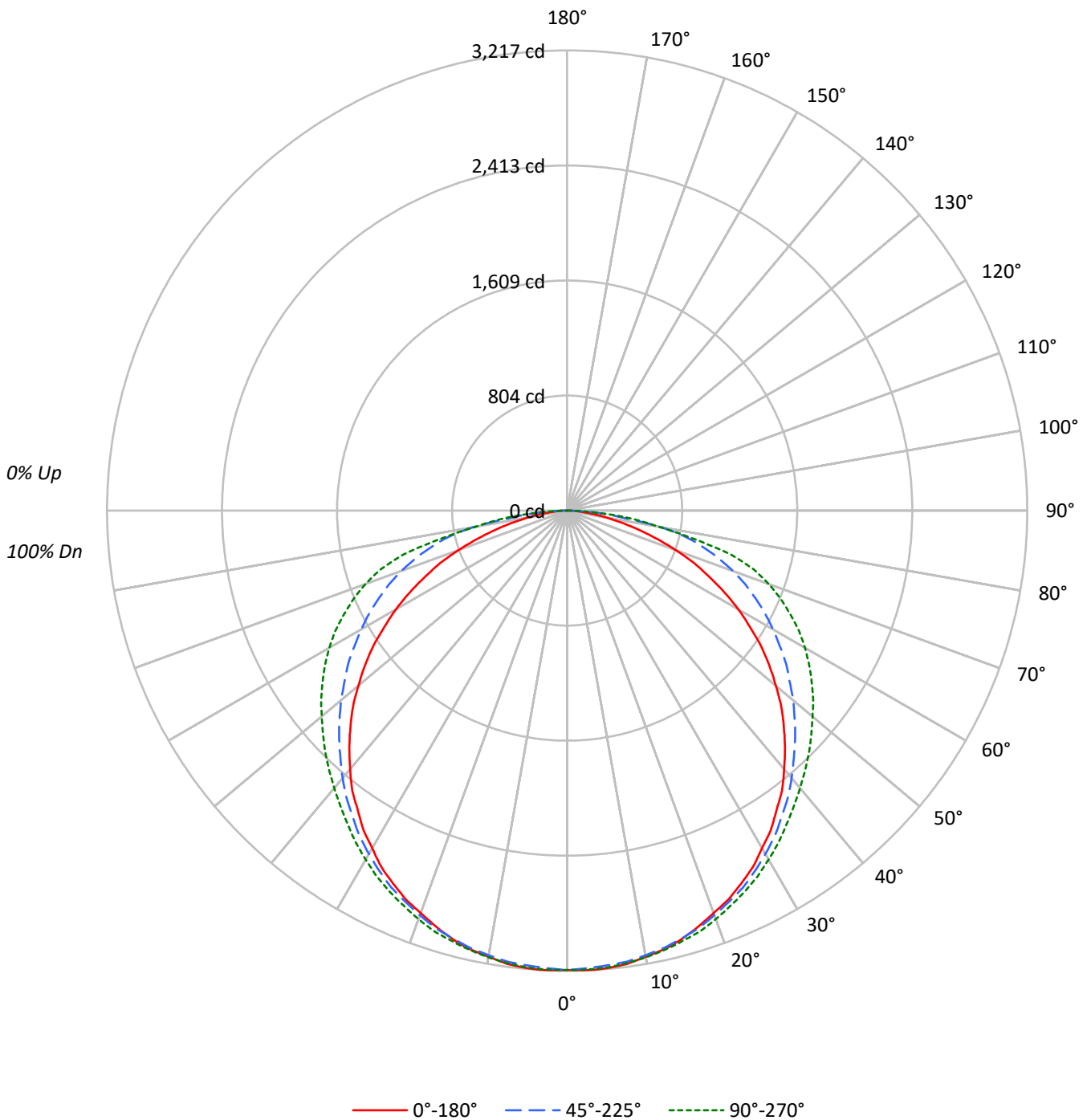
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4322	4322	4322
5°	4338	4311	4331
10°	4326	4312	4333
15°	4319	4312	4340
20°	4287	4309	4352
25°	4272	4317	4362
30°	4235	4305	4376
35°	4194	4294	4394
40°	4147	4289	4449
45°	4078	4290	4550
50°	3987	4316	4687
55°	3886	4385	4896
60°	3722	4472	5167
65°	3484	4629	5484
70°	3169	4843	5899
75°	2687	5109	6163
80°	2120	5143	4985
85°	1564	3910	4380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.7	3.0
10°-20°	876.9	8.6
20°-30°	1340.9	13.1
30°-40°	1639.3	16.0
40°-50°	1747.2	17.1
50°-60°	1670.5	16.4
60°-70°	1415.1	13.9
70°-80°	951.1	9.3
80°-90°	268.3	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°	2522.5	24.7
0°-40°	4161.8	40.7
0°-60°	7579.4	74.2
0°-90°	10213.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10213.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3212	3212	3212	3212	3212	
5°	3212	3207	3192	3207	3207	305
15°	3100	3100	3096	3121	3116	874
25°	2878	2888	2908	2933	2938	1326
35°	2553	2574	2614	2665	2675	1600
45°	2143	2178	2254	2351	2391	1653
55°	1657	1717	1869	2016	2087	1476
65°	1094	1206	1454	1646	1722	1086
75°	517	704	983	1150	1186	553
85°	101	208	253	274	284	125
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3212.0	3212.0	3212.0	3212.0	3212.0
2.5°	3217.0	3217.0	3201.8	3212.0	3212.0
5°	3212.0	3206.9	3191.7	3206.9	3206.9
7.5°	3196.8	3191.7	3181.6	3196.8	3191.7
10°	3166.4	3166.4	3156.3	3171.5	3171.5
12.5°	3141.1	3136.0	3130.9	3151.2	3146.1
15°	3100.5	3100.5	3095.5	3120.8	3115.7
17.5°	3049.9	3054.9	3060.0	3080.3	3085.3
20°	2994.1	3004.3	3009.3	3039.7	3039.7
22.5°	2943.5	2948.5	2958.7	2989.1	2989.1
25°	2877.6	2887.7	2908.0	2933.3	2938.4
27.5°	2811.7	2816.8	2842.1	2877.6	2882.7
30°	2725.6	2740.8	2771.2	2811.7	2816.8
32.5°	2649.6	2664.8	2700.3	2740.8	2751.0
35°	2553.4	2573.6	2614.2	2664.8	2675.0
37.5°	2467.2	2482.4	2533.1	2588.8	2604.0
40°	2360.9	2391.3	2441.9	2507.8	2533.1
42.5°	2254.5	2284.9	2345.7	2431.8	2462.2
45°	2143.0	2178.5	2254.5	2350.7	2391.3
47.5°	2031.6	2072.1	2158.2	2269.7	2315.3
50°	1904.9	1955.6	2061.9	2188.6	2239.3
52.5°	1783.3	1844.1	1960.6	2102.5	2168.3
55°	1656.7	1717.4	1869.4	2016.4	2087.3
57.5°	1514.8	1595.9	1763.0	1930.2	2006.2
60°	1383.1	1459.1	1661.7	1844.1	1920.1
62.5°	1241.2	1342.5	1560.4	1752.9	1828.9
65°	1094.3	1205.8	1454.0	1646.5	1722.5
67.5°	962.6	1084.2	1347.6	1540.1	1616.1
70°	805.5	957.5	1231.1	1423.6	1499.6
72.5°	658.6	825.8	1109.5	1297.0	1367.9
75°	516.8	704.2	982.8	1150.0	1185.5
77.5°	385.0	582.6	851.1	922.1	896.7
80°	273.6	466.1	663.7	628.2	643.4
82.5°	177.3	354.6	410.4	466.1	481.3
85°	101.3	207.7	253.3	273.6	283.7
87.5°	45.6	76.0	101.3	101.3	96.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)