

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: P391326

Luminaire Tested: **24CZ2-40VHE-HRP-UNV-L950-CD1-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: P391326  
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: 24CZ2-40VHE-HRP-UNV-L950-CD1-SDWPD1-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: 3035.2 lumens  
Efficiency: N/A  
Efficacy: 115.8 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

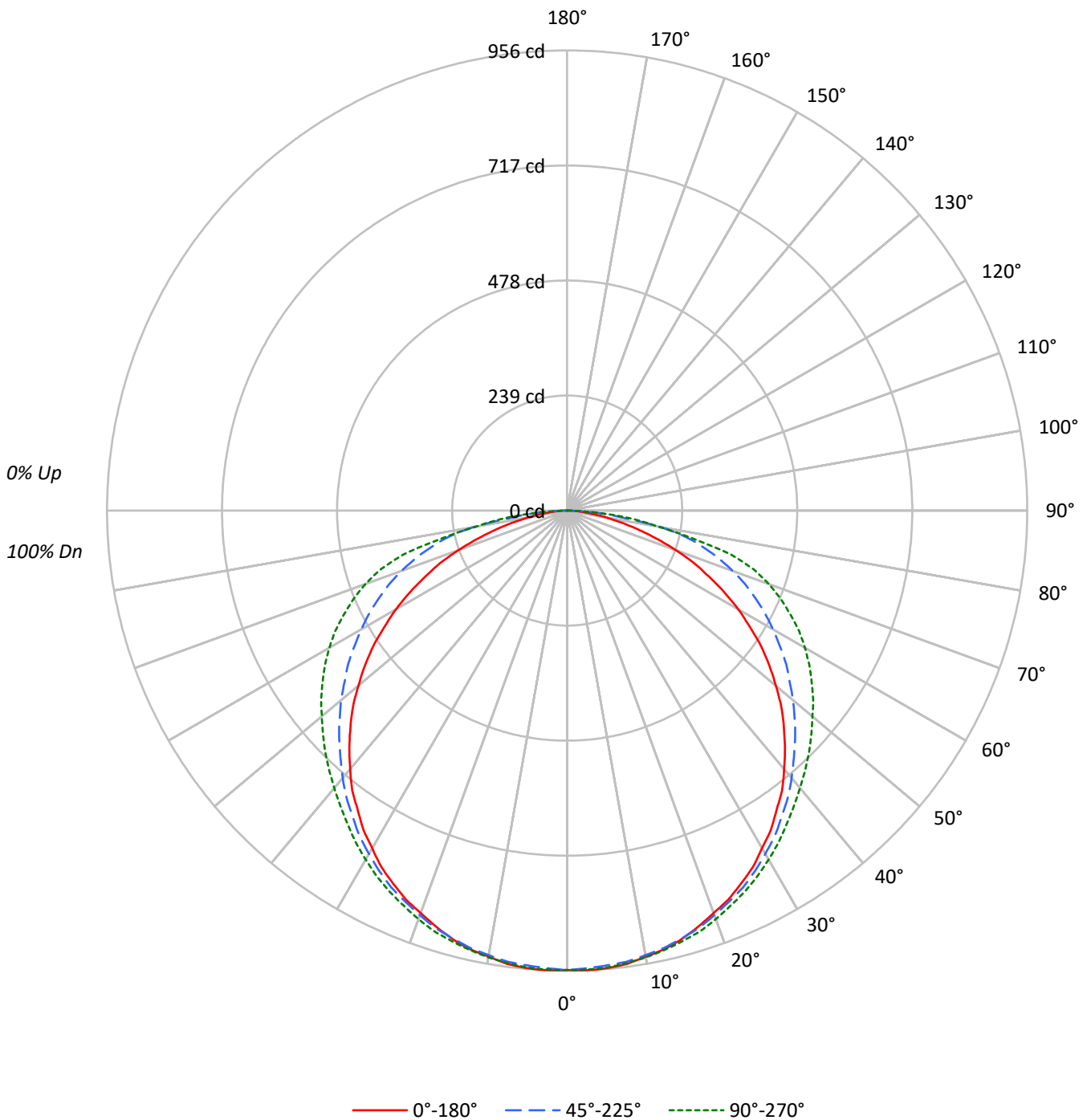
Input Watts (W): 26.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1284	1284	1284
5°	1289	1281	1287
10°	1286	1281	1288
15°	1283	1281	1290
20°	1274	1280	1293
25°	1269	1283	1296
30°	1258	1279	1301
35°	1246	1276	1306
40°	1232	1274	1322
45°	1212	1275	1352
50°	1185	1283	1393
55°	1155	1303	1455
60°	1106	1329	1535
65°	1035	1376	1630
70°	942	1439	1753
75°	799	1519	1831
80°	630	1528	1481
85°	465	1162	1301



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.5	3.0
10°-20°	260.6	8.6
20°-30°	398.5	13.1
30°-40°	487.1	16.0
40°-50°	519.2	17.1
50°-60°	496.4	16.4
60°-70°	420.5	13.9
70°-80°	282.6	9.3
80°-90°	79.7	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°	749.6	24.7
0°-40°	1236.7	40.7
0°-60°	2252.3	74.2
0°-90°	3035.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3035.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	954	953	948	953	953	91
15°	921	921	920	927	926	260
25°	855	858	864	872	873	394
35°	759	765	777	792	795	475
45°	637	647	670	698	711	491
55°	492	510	556	599	620	438
65°	325	358	432	489	512	323
75°	154	209	292	342	352	164
85°	30	62	75	81	84	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.5	954.5	954.5	954.5	954.5
2.5°	956.0	956.0	951.5	954.5	954.5
5°	954.5	953.0	948.5	953.0	953.0
7.5°	950.0	948.5	945.5	950.0	948.5
10°	940.9	940.9	937.9	942.4	942.4
12.5°	933.4	931.9	930.4	936.4	934.9
15°	921.4	921.4	919.9	927.4	925.9
17.5°	906.3	907.8	909.3	915.3	916.8
20°	889.7	892.8	894.3	903.3	903.3
22.5°	874.7	876.2	879.2	888.2	888.2
25°	855.1	858.1	864.2	871.7	873.2
27.5°	835.5	837.1	844.6	855.1	856.6
30°	810.0	814.5	823.5	835.5	837.1
32.5°	787.4	791.9	802.4	814.5	817.5
35°	758.8	764.8	776.8	791.9	794.9
37.5°	733.2	737.7	752.7	769.3	773.8
40°	701.6	710.6	725.6	745.2	752.7
42.5°	669.9	679.0	697.0	722.6	731.7
45°	636.8	647.4	669.9	698.5	710.6
47.5°	603.7	615.7	641.3	674.5	688.0
50°	566.1	581.1	612.7	650.4	665.4
52.5°	529.9	548.0	582.6	624.8	644.4
55°	492.3	510.4	555.5	599.2	620.3
57.5°	450.1	474.2	523.9	573.6	596.2
60°	411.0	433.6	493.8	548.0	570.6
62.5°	368.8	399.0	463.7	520.9	543.5
65°	325.2	358.3	432.1	489.3	511.9
67.5°	286.0	322.2	400.5	457.7	480.3
70°	239.4	284.5	365.8	423.0	445.6
72.5°	195.7	245.4	329.7	385.4	406.5
75°	153.6	209.3	292.1	341.7	352.3
77.5°	114.4	173.1	252.9	274.0	266.5
80°	81.3	138.5	197.2	186.7	191.2
82.5°	52.7	105.4	121.9	138.5	143.0
85°	30.1	61.7	75.3	81.3	84.3
87.5°	13.5	22.6	30.1	30.1	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)