

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: P389718

Luminaire Tested: **24CZ2-35VHE-S-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: P389718  
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: 24CZ2-35VHE-S-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3277.6 lumens  
Efficiency: N/A  
Efficacy: 143.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

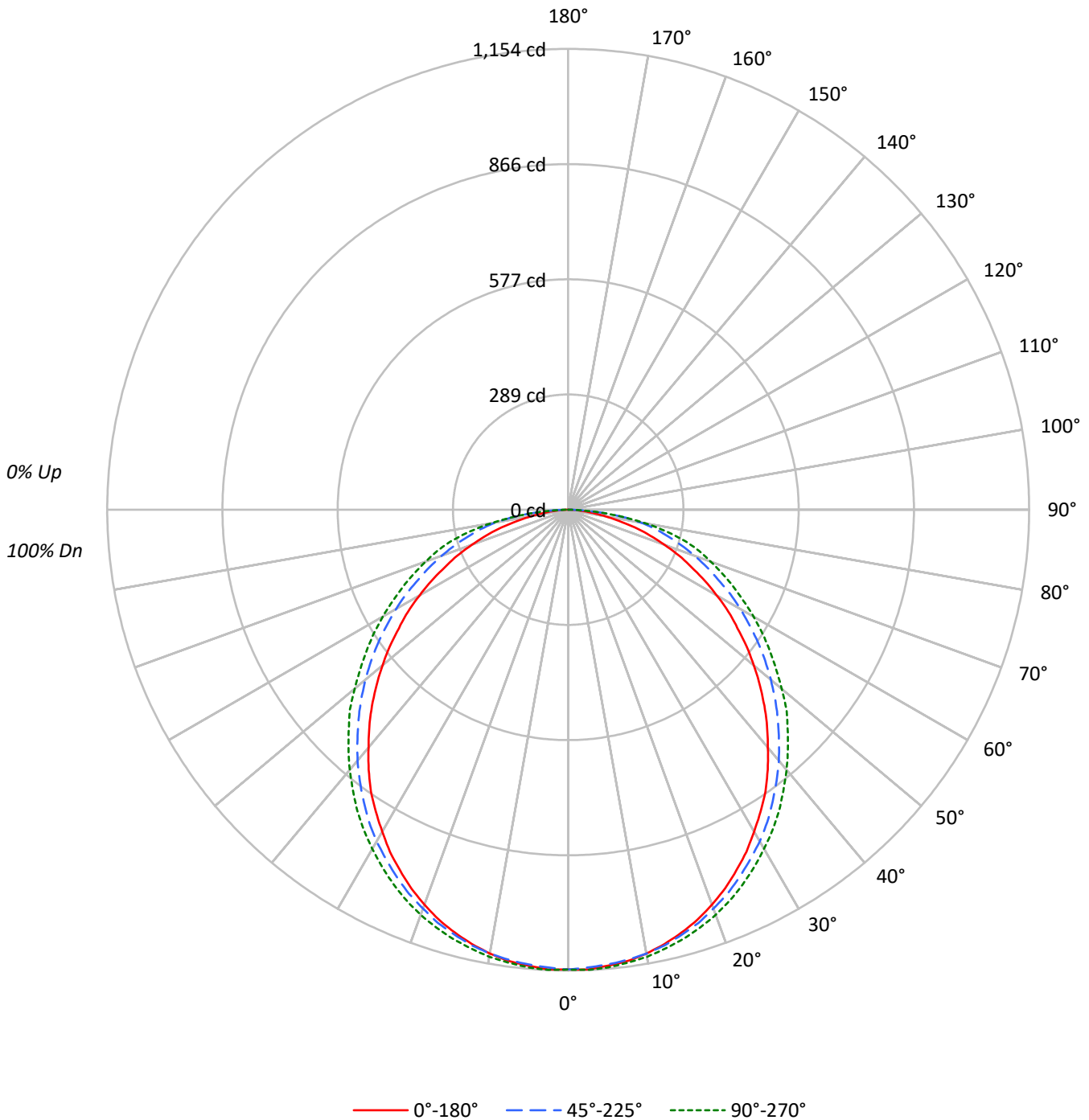
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1549	1549	1549
5°	1548	1544	1554
10°	1542	1542	1553
15°	1527	1534	1550
20°	1507	1522	1546
25°	1479	1507	1536
30°	1446	1490	1524
35°	1414	1465	1512
40°	1366	1441	1494
45°	1321	1412	1478
50°	1271	1386	1460
55°	1214	1360	1446
60°	1157	1339	1443
65°	1084	1316	1452
70°	1004	1323	1491
75°	898	1347	1575
80°	726	1428	1540
85°	546	1254	1221



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.0	3.3
10°-20°	311.5	9.5
20°-30°	468.2	14.3
30°-40°	557.7	17.0
40°-50°	570.8	17.4
50°-60°	513.9	15.7
60°-70°	403.6	12.3
70°-80°	261.9	8.0
80°-90°	81.0	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°	888.7	27.1
0°-40°	1446.4	44.1
0°-60°	2531.1	77.2
0°-90°	3277.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3277.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1146	1148	1143	1149	1150	109
15°	1096	1099	1102	1111	1113	309
25°	996	1005	1015	1032	1035	459
35°	861	871	892	914	920	537
45°	694	711	742	770	777	535
55°	517	540	580	610	616	464
65°	340	366	413	448	456	339
75°	173	206	259	295	303	183
85°	35	66	81	79	79	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1152.5	1152.5	1147.3	1152.5	1153.5
5°	1146.2	1148.3	1143.1	1149.4	1150.4
7.5°	1140.0	1140.0	1136.9	1143.1	1144.2
10°	1128.5	1129.6	1128.5	1135.8	1136.9
12.5°	1114.0	1116.0	1117.1	1124.4	1125.4
15°	1096.3	1099.4	1101.5	1110.8	1112.9
17.5°	1076.5	1079.6	1084.8	1095.2	1097.3
20°	1052.5	1056.7	1062.9	1076.5	1079.6
22.5°	1026.5	1030.7	1041.1	1053.6	1058.8
25°	996.3	1004.6	1015.1	1031.7	1034.8
27.5°	966.1	973.4	987.0	1004.6	1008.8
30°	930.7	942.2	958.8	976.5	980.7
32.5°	896.4	907.8	927.6	946.3	951.6
35°	861.0	871.4	892.2	914.1	920.3
37.5°	820.4	833.9	856.8	878.7	884.9
40°	777.7	794.3	820.4	843.3	850.6
42.5°	737.1	754.8	780.8	805.8	814.1
45°	694.4	711.1	742.3	770.4	776.7
47.5°	650.7	669.4	702.7	730.8	741.3
50°	607.0	626.7	662.1	691.3	697.5
52.5°	563.2	584.0	621.5	652.8	655.9
55°	517.4	540.3	579.9	610.1	616.3
57.5°	475.8	495.6	538.2	569.5	576.8
60°	430.0	451.8	497.6	526.8	536.2
62.5°	386.2	409.1	457.0	486.2	494.5
65°	340.4	366.5	413.3	447.7	456.0
67.5°	300.9	325.9	375.8	409.1	417.5
70°	255.1	283.2	336.3	370.6	379.0
72.5°	215.5	244.7	297.8	331.1	343.6
75°	172.8	206.1	259.2	294.6	303.0
77.5°	131.2	169.7	223.8	250.9	250.9
80°	93.7	134.3	184.3	196.8	198.8
82.5°	61.4	101.0	136.4	135.3	135.3
85°	35.4	65.6	81.2	79.1	79.1
87.5°	13.5	27.1	29.2	29.2	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)