

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: P388515

Luminaire Tested: **24CZ2-30VHE-SQR-UNV-L935-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: P388515  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30VHE-SQR-UNV-L935-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2385.4 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

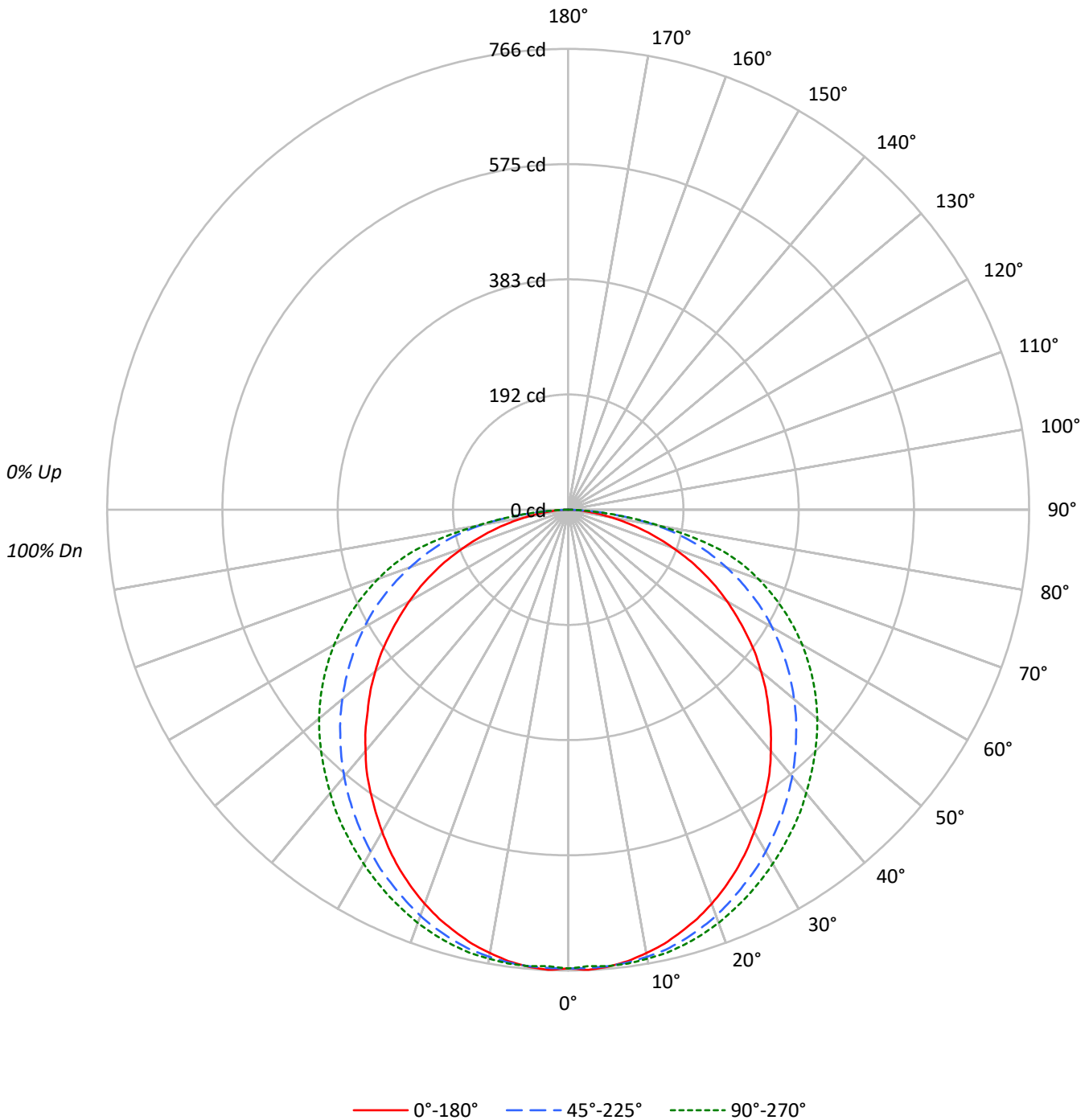
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	1026	1026	1026
5°	1030	1029	1029
10°	1022	1031	1035
15°	1012	1031	1042
20°	998	1029	1047
25°	981	1023	1050
30°	961	1019	1056
35°	941	1017	1066
40°	920	1017	1081
45°	896	1019	1102
50°	876	1025	1131
55°	850	1037	1166
60°	820	1054	1208
65°	785	1073	1259
70°	728	1100	1323
75°	659	1138	1384
80°	556	1141	1190
85°	426	863	863



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	3.0
10°-20°	208.2	8.7
20°-30°	316.3	13.3
30°-40°	384.7	16.1
40°-50°	409.6	17.2
50°-60°	390.1	16.4
60°-70°	326.3	13.7
70°-80°	217.5	9.1
80°-90°	60.2	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°	596.9	25.0
0°-40°	981.7	41.2
0°-60°	1781.4	74.7
0°-90°	2385.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2385.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	762	758	762	762	762	72
15°	726	728	740	746	748	205
25°	661	670	689	701	707	304
35°	573	589	619	640	649	358
45°	471	496	536	566	579	364
55°	362	394	442	480	497	324
65°	246	283	337	379	395	244
75°	127	167	219	256	266	134
85°	28	51	56	55	56	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	762.5	762.5	762.5	762.5	762.5
2.5°	765.6	760.1	762.5	762.5	759.3
5°	762.5	757.8	761.7	761.7	761.7
7.5°	757.0	753.0	759.3	760.9	760.9
10°	748.3	746.7	754.6	757.0	757.8
12.5°	738.9	738.1	749.1	752.2	754.6
15°	726.3	727.8	740.4	745.9	748.3
17.5°	712.9	716.0	730.2	738.1	740.4
20°	697.1	701.8	718.4	726.3	731.0
22.5°	679.8	686.9	704.2	713.7	719.2
25°	660.9	669.5	689.2	701.0	707.4
27.5°	640.4	651.4	674.3	687.7	694.0
30°	618.3	630.9	656.2	671.9	679.8
32.5°	595.5	610.5	638.0	655.4	664.8
35°	572.7	589.2	619.1	639.6	649.1
37.5°	549.8	566.4	599.4	621.5	633.3
40°	523.8	543.5	579.0	603.4	615.2
42.5°	498.6	519.9	557.7	584.5	597.1
45°	471.0	496.2	535.6	565.6	579.0
47.5°	445.8	471.0	513.6	545.1	560.1
50°	418.3	445.0	489.9	524.6	540.4
52.5°	391.5	419.1	466.3	503.3	519.1
55°	362.3	393.8	441.9	480.5	497.0
57.5°	333.2	367.1	416.7	456.9	473.4
60°	304.8	339.5	391.5	431.7	449.0
62.5°	276.5	311.1	365.5	406.5	423.0
65°	246.5	282.8	337.1	378.9	395.4
67.5°	216.6	254.4	308.8	350.5	366.3
70°	185.1	225.3	279.6	320.6	336.3
72.5°	156.0	196.1	249.7	289.9	304.8
75°	126.8	167.0	219.0	256.0	266.2
77.5°	98.5	138.6	185.1	209.5	211.9
80°	71.7	109.5	147.3	154.4	153.6
82.5°	48.0	81.9	101.6	102.4	104.8
85°	27.6	51.2	55.9	55.1	55.9
87.5°	11.0	18.1	15.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)