

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: P388542

Luminaire Tested: **24CZ2-35-SQR-UNV-L940-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: P388542  
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: 24CZ2-35-SQR-UNV-L940-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2912.0 lumens  
Efficiency: N/A  
Efficacy: 96.7 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

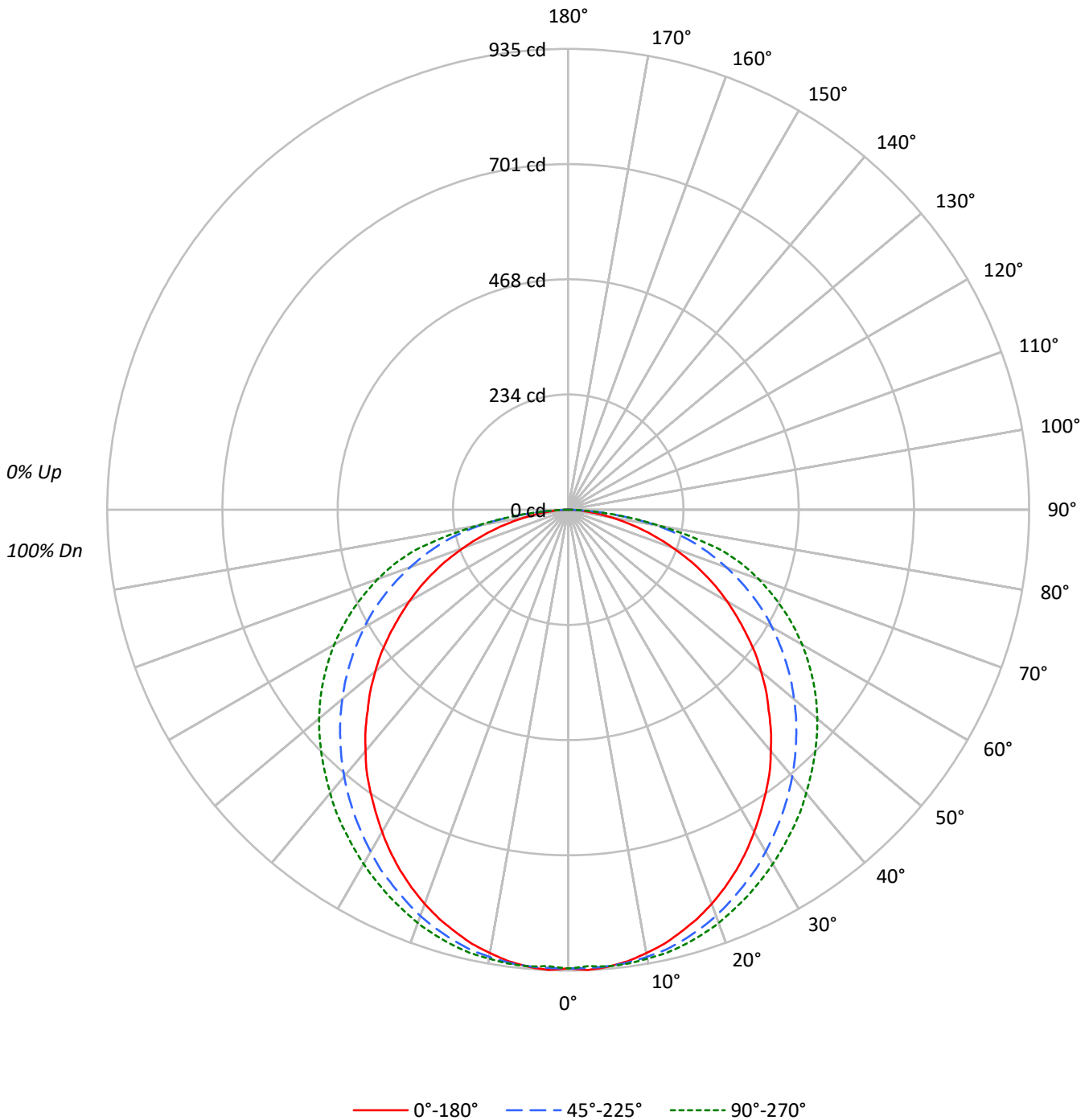
Input Watts (W): 30.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1252	1252	1252
5°	1257	1256	1256
10°	1248	1259	1264
15°	1235	1259	1272
20°	1218	1256	1278
25°	1198	1249	1282
30°	1173	1244	1289
35°	1148	1241	1301
40°	1123	1241	1319
45°	1094	1244	1345
50°	1069	1252	1381
55°	1038	1266	1423
60°	1001	1286	1475
65°	958	1310	1537
70°	889	1343	1615
75°	805	1390	1690
80°	678	1393	1453
85°	520	1054	1054



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.4	3.0
10°-20°	254.2	8.7
20°-30°	386.1	13.3
30°-40°	469.7	16.1
40°-50°	500.0	17.2
50°-60°	476.3	16.4
60°-70°	398.3	13.7
70°-80°	265.6	9.1
80°-90°	73.5	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°	728.7	25.0
0°-40°	1198.4	41.2
0°-60°	2174.7	74.7
0°-90°	2912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2912.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	931	931	931	931	931	
5°	931	925	930	930	930	88
15°	887	888	904	911	914	250
25°	807	817	841	856	864	371
35°	699	719	756	781	792	437
45°	575	606	654	690	707	445
55°	442	481	540	587	607	395
65°	301	345	412	462	483	297
75°	155	204	267	312	325	164
85°	34	62	68	67	68	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	930.8	930.8	930.8	930.8	930.8
2.5°	934.7	927.9	930.8	930.8	927.0
5°	930.8	925.0	929.9	929.9	929.9
7.5°	924.1	919.3	927.0	928.9	928.9
10°	913.5	911.6	921.2	924.1	925.0
12.5°	902.0	901.0	914.5	918.3	921.2
15°	886.6	888.5	903.9	910.6	913.5
17.5°	870.2	874.1	891.4	901.0	903.9
20°	851.0	856.8	877.0	886.6	892.4
22.5°	829.9	838.5	859.7	871.2	877.9
25°	806.8	817.3	841.4	855.8	863.5
27.5°	781.8	795.2	823.1	839.5	847.2
30°	754.8	770.2	801.0	820.2	829.9
32.5°	727.0	745.2	778.9	800.0	811.6
35°	699.1	719.3	755.8	780.8	792.3
37.5°	671.2	691.4	731.8	758.7	773.1
40°	639.5	663.5	706.8	736.6	751.0
42.5°	608.7	634.6	680.8	713.5	728.9
45°	575.0	605.8	653.9	690.4	706.8
47.5°	544.3	575.0	627.0	665.4	683.7
50°	510.6	543.3	598.1	640.4	659.6
52.5°	477.9	511.6	569.3	614.5	633.7
55°	442.3	480.8	539.5	586.6	606.8
57.5°	406.8	448.1	508.7	557.7	577.9
60°	372.1	414.4	477.9	527.0	548.1
62.5°	337.5	379.8	446.2	496.2	516.4
65°	301.0	345.2	411.6	462.5	482.7
67.5°	264.4	310.6	376.9	427.9	447.1
70°	226.0	275.0	341.4	391.4	410.6
72.5°	190.4	239.4	304.8	353.9	372.1
75°	154.8	203.9	267.3	312.5	325.0
77.5°	120.2	169.2	226.0	255.8	258.7
80°	87.5	133.7	179.8	188.5	187.5
82.5°	58.7	100.0	124.0	125.0	127.9
85°	33.7	62.5	68.3	67.3	68.3
87.5°	13.5	22.1	19.2	14.4	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)