

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: P388470

Luminaire Tested: **24CZ2-30-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: P388470  
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: 24CZ2-30-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: 2426.9 lumens  
Efficiency: N/A  
Efficacy: 100.3 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

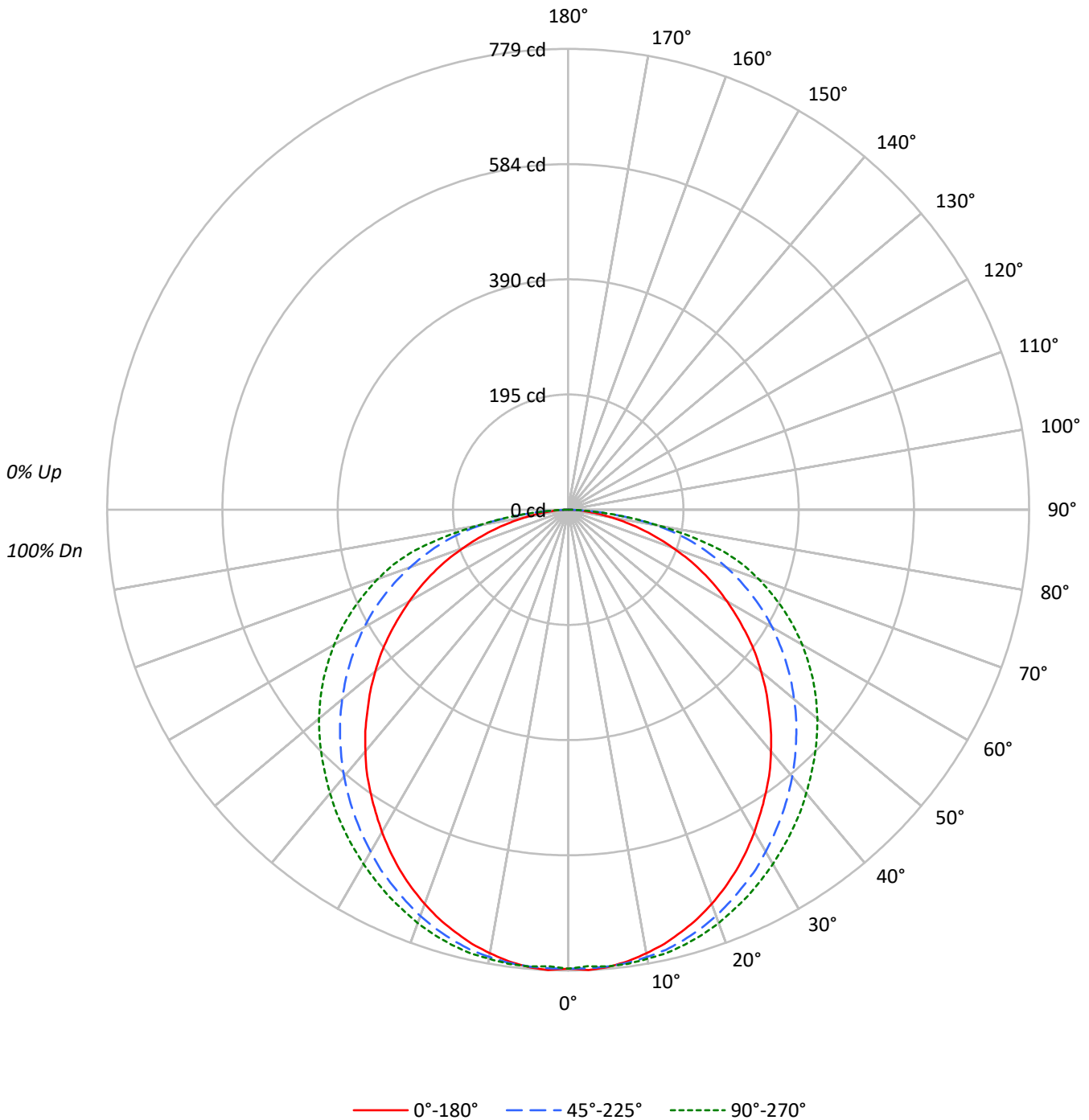
Input Watts (W): 24.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1044	1044	1044
5°	1048	1047	1047
10°	1040	1049	1053
15°	1029	1049	1060
20°	1015	1047	1065
25°	998	1041	1068
30°	977	1037	1074
35°	957	1035	1085
40°	936	1035	1099
45°	912	1037	1121
50°	891	1043	1151
55°	865	1055	1186
60°	834	1072	1229
65°	798	1092	1281
70°	741	1119	1346
75°	671	1158	1408
80°	565	1161	1211
85°	432	878	878



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.6	3.0
10°-20°	211.9	8.7
20°-30°	321.8	13.3
30°-40°	391.4	16.1
40°-50°	416.7	17.2
50°-60°	396.9	16.4
60°-70°	331.9	13.7
70°-80°	221.3	9.1
80°-90°	61.2	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°	607.3	25.0
0°-40°	998.7	41.2
0°-60°	1812.4	74.7
0°-90°	2426.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2426.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	776	771	775	775	775	74
15°	739	740	753	759	761	208
25°	672	681	701	713	720	310
35°	583	599	630	651	660	365
45°	479	505	545	575	589	370
55°	369	401	450	489	506	330
65°	251	288	343	386	402	248
75°	129	170	223	260	271	137
85°	28	52	57	56	57	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	775.8	775.8	775.8	775.8	775.8
2.5°	779.0	773.4	775.8	775.8	772.5
5°	775.8	770.9	775.0	775.0	775.0
7.5°	770.1	766.1	772.5	774.2	774.2
10°	761.3	759.7	767.7	770.1	770.9
12.5°	751.7	750.9	762.1	765.3	767.7
15°	738.9	740.5	753.3	758.9	761.3
17.5°	725.3	728.5	742.9	750.9	753.3
20°	709.2	714.0	730.9	738.9	743.7
22.5°	691.6	698.8	716.5	726.1	731.7
25°	672.4	681.2	701.2	713.2	719.7
27.5°	651.5	662.8	686.0	699.6	706.0
30°	629.1	641.9	667.6	683.6	691.6
32.5°	605.9	621.1	649.1	666.8	676.4
35°	582.6	599.4	629.9	650.7	660.4
37.5°	559.4	576.2	609.9	632.3	644.3
40°	532.9	553.0	589.0	613.9	625.9
42.5°	507.3	528.9	567.4	594.6	607.5
45°	479.2	504.9	545.0	575.4	589.0
47.5°	453.6	479.2	522.5	554.6	569.8
50°	425.5	452.8	498.5	533.7	549.8
52.5°	398.3	426.3	474.4	512.1	528.1
55°	368.6	400.7	449.6	488.9	505.7
57.5°	339.0	373.5	423.9	464.8	481.6
60°	310.1	345.4	398.3	439.2	456.8
62.5°	281.3	316.6	371.8	413.5	430.4
65°	250.8	287.7	343.0	385.5	402.3
67.5°	220.4	258.9	314.1	356.6	372.7
70°	188.3	229.2	284.5	326.2	342.2
72.5°	158.7	199.5	254.0	294.9	310.1
75°	129.0	169.9	222.8	260.5	270.9
77.5°	100.2	141.0	188.3	213.2	215.6
80°	72.9	111.4	149.9	157.1	156.3
82.5°	48.9	83.3	103.4	104.2	106.6
85°	28.0	52.1	56.9	56.1	56.9
87.5°	11.2	18.4	16.0	12.0	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)