

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: P388488

Luminaire Tested: **24CZ2-30HE-SQR-UNV-L930-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: P388488  
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: 24CZ2-30HE-SQR-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2330.2 lumens  
Efficiency: N/A  
Efficacy: 104.0 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

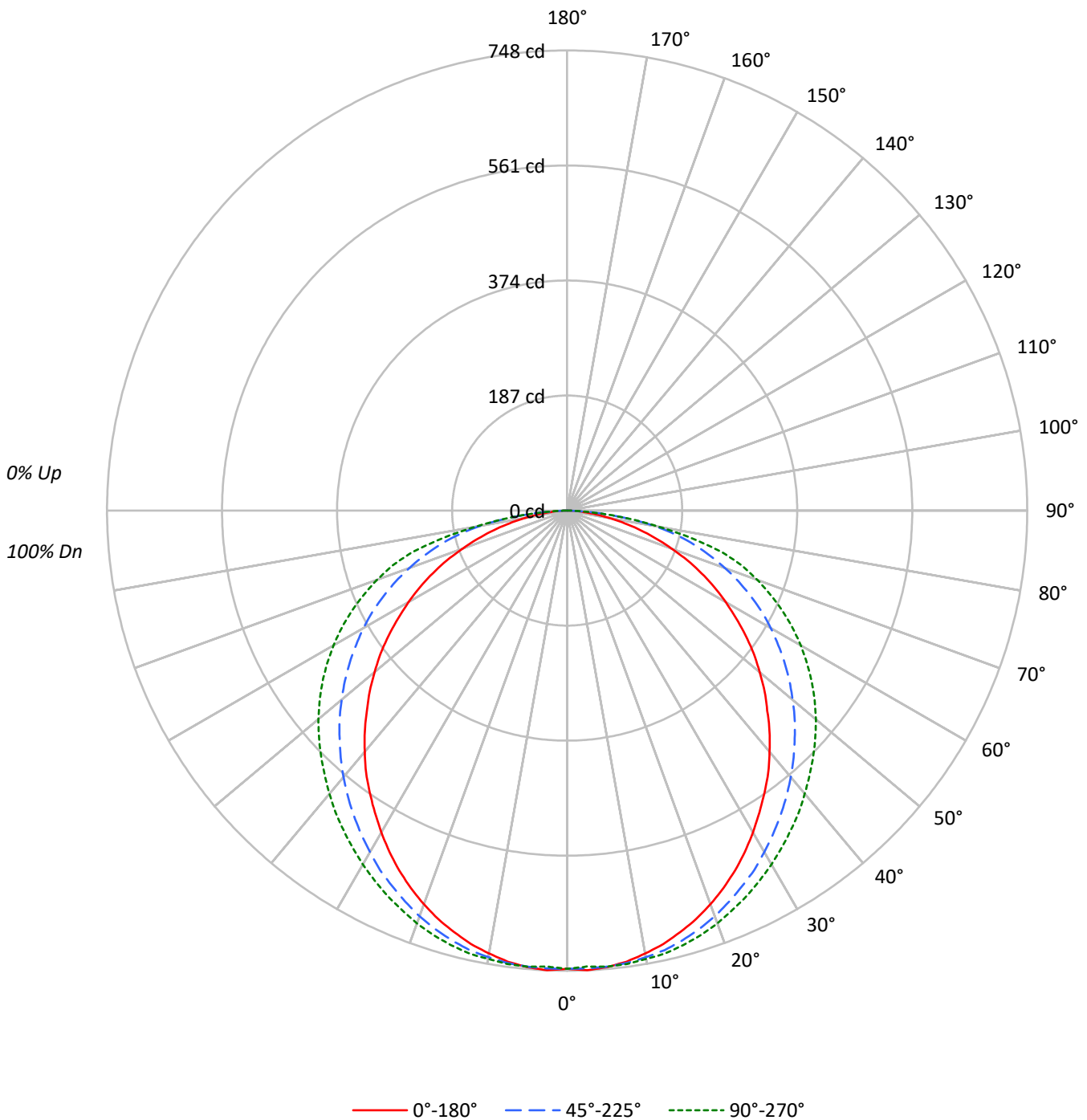
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388488

CATALOG NUMBER: 24CZ2-30HE-SQR-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388488

CATALOG NUMBER: 24CZ2-30HE-SQR-UNV-L930-CD1-SDWPD1-U

**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°	1002	1002	1002
5°	1006	1005	1005
10°	999	1007	1011
15°	988	1008	1018
20°	975	1005	1022
25°	958	1000	1026
30°	938	996	1032
35°	919	993	1041
40°	899	993	1056
45°	875	996	1076
50°	855	1002	1105
55°	830	1013	1139
60°	801	1029	1180
65°	767	1048	1230
70°	711	1075	1293
75°	644	1112	1352
80°	542	1115	1162
85°	415	843	843



TEST NUMBER: P388488

CATALOG NUMBER: 24CZ2-30HE-SQR-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.7	3.0
10°-20°	203.4	8.7
20°-30°	309.0	13.3
30°-40°	375.8	16.1
40°-50°	400.1	17.2
50°-60°	381.1	16.4
60°-70°	318.7	13.7
70°-80°	212.5	9.1
80°-90°	58.8	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°	583.1	25.0
0°-40°	958.9	41.2
0°-60°	1740.2	74.7
0°-90°	2330.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2330.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	745	745	745	745	745	
5°	745	740	744	744	744	71
15°	709	711	723	729	731	200
25°	646	654	673	685	691	297
35°	559	576	605	625	634	350
45°	460	485	523	552	566	356
55°	354	385	432	469	486	316
65°	241	276	329	370	386	238
75°	124	163	214	250	260	131
85°	27	50	55	54	55	33
90°	0	0	0	0	0	



TEST NUMBER: P388488

CATALOG NUMBER: 24CZ2-30HE-SQR-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	744.8	744.8	744.8	744.8	744.8
2.5°	747.9	742.5	744.8	744.8	741.8
5°	744.8	740.2	744.1	744.1	744.1
7.5°	739.5	735.6	741.8	743.3	743.3
10°	731.0	729.5	737.2	739.5	740.2
12.5°	721.8	721.0	731.8	734.8	737.2
15°	709.4	711.0	723.3	728.7	731.0
17.5°	696.4	699.4	713.3	721.0	723.3
20°	681.0	685.6	701.8	709.4	714.1
22.5°	664.1	671.0	687.9	697.1	702.5
25°	645.6	654.0	673.3	684.8	691.0
27.5°	625.6	636.4	658.7	671.7	677.9
30°	604.0	616.3	641.0	656.4	664.1
32.5°	581.7	596.3	623.3	640.2	649.4
35°	559.4	575.6	604.8	624.8	634.0
37.5°	537.1	553.2	585.6	607.1	618.7
40°	511.7	530.9	565.6	589.4	601.0
42.5°	487.1	507.8	544.8	570.9	583.3
45°	460.1	484.8	523.2	552.5	565.6
47.5°	435.5	460.1	501.7	532.5	547.1
50°	408.6	434.7	478.6	512.5	527.9
52.5°	382.4	409.4	455.5	491.7	507.1
55°	354.0	384.7	431.7	469.4	485.5
57.5°	325.5	358.6	407.0	446.3	462.5
60°	297.8	331.6	382.4	421.7	438.6
62.5°	270.1	303.9	357.0	397.0	413.2
65°	240.8	276.2	329.3	370.1	386.3
67.5°	211.6	248.5	301.6	342.4	357.8
70°	180.8	220.1	273.2	313.2	328.6
72.5°	152.4	191.6	243.9	283.2	297.8
75°	123.9	163.1	213.9	250.1	260.1
77.5°	96.2	135.4	180.8	204.7	207.0
80°	70.0	107.0	143.9	150.8	150.0
82.5°	46.9	80.0	99.3	100.0	102.3
85°	26.9	50.0	54.6	53.9	54.6
87.5°	10.8	17.7	15.4	11.5	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)