

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: P388513

Luminaire Tested: **24CZ2-30VHE-SQR-UNV-L930-CD1-SWPD1-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: P388513  
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-L930-CD1-SWPD1-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: 2356.3 lumens  
Efficiency: N/A  
Efficacy: 115.5 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

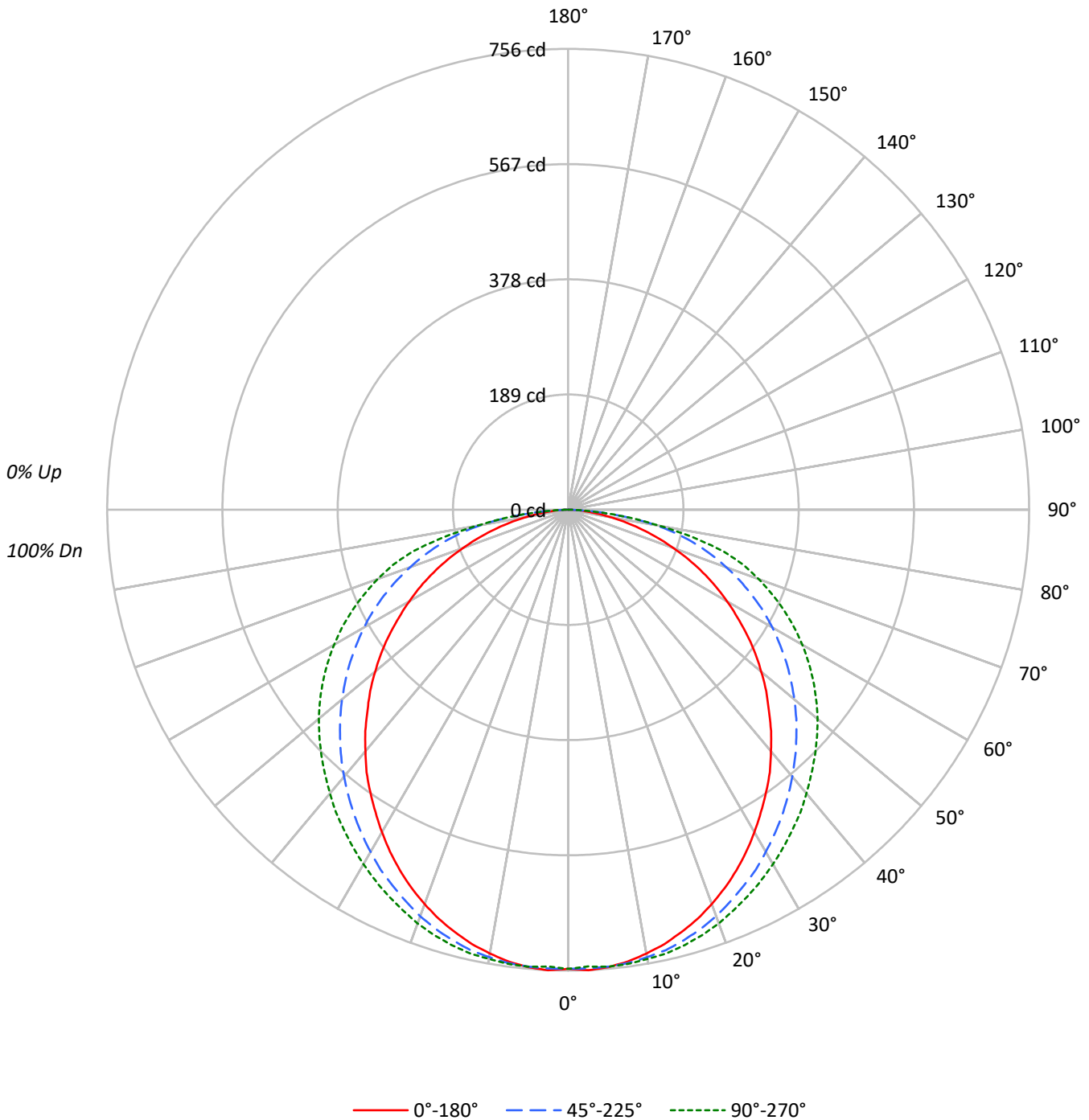
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388513

CATALOG NUMBER: 24CZ2-30VHE-SQR-UNV-L930-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388513

CATALOG NUMBER: 24CZ2-30VHE-SQR-UNV-L930-CD1-SWPD1-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°	1013	1013	1013
5°	1017	1016	1016
10°	1010	1018	1023
15°	999	1019	1030
20°	986	1016	1034
25°	969	1011	1037
30°	949	1007	1043
35°	929	1005	1053
40°	909	1004	1067
45°	885	1007	1088
50°	865	1013	1117
55°	840	1024	1152
60°	810	1041	1193
65°	775	1060	1244
70°	720	1087	1307
75°	651	1124	1367
80°	549	1127	1175
85°	420	852	852



TEST NUMBER: P388513

CATALOG NUMBER: 24CZ2-30VHE-SQR-UNV-L930-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.5	3.0
10°-20°	205.7	8.7
20°-30°	312.4	13.3
30°-40°	380.0	16.1
40°-50°	404.6	17.2
50°-60°	385.4	16.4
60°-70°	322.3	13.7
70°-80°	214.9	9.1
80°-90°	59.5	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°	589.6	25.0
0°-40°	969.7	41.2
0°-60°	1759.7	74.7
0°-90°	2356.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2356.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	753	753	753	753	753	
5°	753	748	752	752	752	71
15°	717	719	731	737	739	202
25°	653	661	681	692	699	301
35°	566	582	612	632	641	354
45°	465	490	529	559	572	360
55°	358	389	436	475	491	320
65°	244	279	333	374	391	241
75°	125	165	216	253	263	133
85°	27	51	55	54	55	33
90°	0	0	0	0	0	



TEST NUMBER: P388513

CATALOG NUMBER: 24CZ2-30VHE-SQR-UNV-L930-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	753.2	753.2	753.2	753.2	753.2
2.5°	756.3	750.9	753.2	753.2	750.1
5°	753.2	748.5	752.4	752.4	752.4
7.5°	747.7	743.9	750.1	751.6	751.6
10°	739.2	737.6	745.4	747.7	748.5
12.5°	729.8	729.1	740.0	743.1	745.4
15°	717.4	719.0	731.4	736.8	739.2
17.5°	704.2	707.3	721.3	729.1	731.4
20°	688.6	693.3	709.6	717.4	722.1
22.5°	671.5	678.5	695.6	704.9	710.4
25°	652.8	661.4	680.8	692.5	698.7
27.5°	632.6	643.5	666.0	679.3	685.5
30°	610.8	623.2	648.1	663.7	671.5
32.5°	588.2	603.0	630.3	647.4	656.7
35°	565.7	582.0	611.6	631.8	641.1
37.5°	543.1	559.4	592.1	613.9	625.6
40°	517.4	536.9	571.9	596.0	607.7
42.5°	492.5	513.5	550.9	577.3	589.8
45°	465.3	490.2	529.1	558.7	571.9
47.5°	440.4	465.3	507.3	538.4	553.2
50°	413.2	439.6	484.0	518.2	533.8
52.5°	386.7	413.9	460.6	497.2	512.8
55°	357.9	389.0	436.5	474.6	491.0
57.5°	329.1	362.6	411.6	451.3	467.6
60°	301.1	335.4	386.7	426.4	443.5
62.5°	273.1	307.3	361.0	401.5	417.8
65°	243.5	279.3	333.0	374.3	390.6
67.5°	214.0	251.3	305.0	346.2	361.8
70°	182.9	222.5	276.2	316.7	332.2
72.5°	154.1	193.7	246.7	286.3	301.1
75°	125.3	165.0	216.3	252.9	263.0
77.5°	97.3	136.9	182.9	207.0	209.3
80°	70.8	108.2	145.5	152.5	151.7
82.5°	47.5	80.9	100.4	101.2	103.5
85°	27.2	50.6	55.2	54.5	55.2
87.5°	10.9	17.9	15.6	11.7	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)