

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: P388345

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L930-CD2-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: P388345  
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: 24CZ2-120VHE-SQR-UNV-L930-CD2-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: 9555.8 lumens  
Efficiency: N/A  
Efficacy: 114.3 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

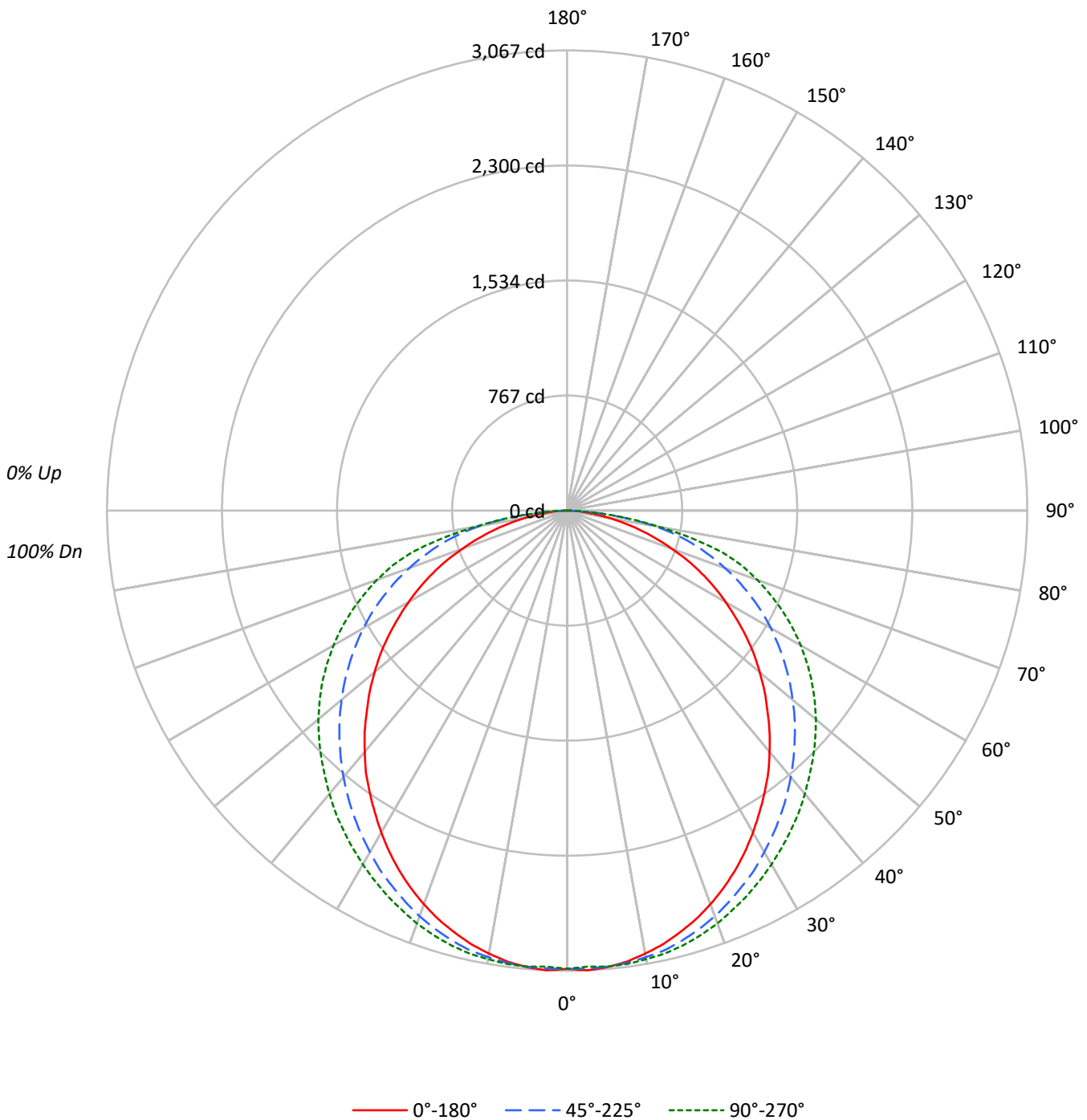
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4110	4110	4110
5°	4125	4121	4121
10°	4096	4130	4147
15°	4053	4132	4176
20°	3999	4121	4193
25°	3930	4099	4207
30°	3848	4084	4231
35°	3768	4074	4271
40°	3686	4074	4329
45°	3591	4083	4413
50°	3507	4108	4531
55°	3405	4153	4671
60°	3286	4220	4840
65°	3145	4300	5043
70°	2917	4407	5301
75°	2641	4560	5545
80°	2225	4572	4768
85°	1704	3458	3458



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	289.9	3.0
10°-20°	834.2	8.7
20°-30°	1267.1	13.3
30°-40°	1541.2	16.1
40°-50°	1640.9	17.2
50°-60°	1562.9	16.4
60°-70°	1307.0	13.7
70°-80°	871.4	9.1
80°-90°	241.1	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°	2391.2	25.0
0°-40°	3932.4	41.2
0°-60°	7136.2	74.7
0°-90°	9555.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9555.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3054	3054	3054	3054	3054	
5°	3054	3036	3051	3051	3051	290
15°	2909	2916	2966	2988	2998	820
25°	2647	2682	2761	2808	2834	1219
35°	2294	2360	2480	2562	2600	1436
45°	1887	1988	2146	2266	2319	1459
55°	1452	1578	1770	1925	1991	1298
65°	988	1133	1350	1518	1584	976
75°	508	669	877	1026	1067	538
85°	110	205	224	221	224	133
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3054.5	3054.5	3054.5	3054.5	3054.5
2.5°	3067.1	3045.0	3054.5	3054.5	3041.9
5°	3054.5	3035.6	3051.3	3051.3	3051.3
7.5°	3032.4	3016.6	3041.9	3048.2	3048.2
10°	2997.7	2991.4	3022.9	3032.4	3035.6
12.5°	2959.8	2956.7	3000.9	3013.5	3022.9
15°	2909.3	2915.7	2966.1	2988.2	2997.7
17.5°	2855.7	2868.3	2925.1	2956.7	2966.1
20°	2792.6	2811.5	2877.8	2909.3	2928.3
22.5°	2723.2	2751.6	2821.0	2858.9	2880.9
25°	2647.4	2682.2	2761.0	2808.4	2833.6
27.5°	2565.4	2609.6	2701.1	2754.7	2780.0
30°	2477.0	2527.5	2628.5	2691.6	2723.2
32.5°	2385.5	2445.5	2555.9	2625.4	2663.2
35°	2294.0	2360.3	2480.2	2562.2	2600.1
37.5°	2202.5	2268.8	2401.3	2489.7	2537.0
40°	2098.4	2177.3	2319.3	2417.1	2464.4
42.5°	1997.4	2082.6	2234.1	2341.4	2391.8
45°	1887.0	1987.9	2145.7	2265.6	2319.3
47.5°	1786.0	1887.0	2057.4	2183.6	2243.5
50°	1675.6	1782.8	1962.7	2101.5	2164.7
52.5°	1568.3	1678.7	1868.0	2016.3	2079.5
55°	1451.5	1577.7	1770.2	1924.8	1991.1
57.5°	1334.8	1470.5	1669.2	1830.2	1896.4
60°	1221.2	1360.0	1568.3	1729.2	1798.6
62.5°	1107.6	1246.4	1464.1	1628.2	1694.5
65°	987.7	1132.8	1350.5	1517.8	1584.0
67.5°	867.8	1019.2	1236.9	1404.2	1467.3
70°	741.5	902.5	1120.2	1284.3	1347.4
72.5°	624.8	785.7	1000.3	1161.2	1221.2
75°	508.0	669.0	877.2	1025.5	1066.6
77.5°	394.4	555.4	741.5	839.4	848.8
80°	287.1	438.6	590.1	618.5	615.3
82.5°	192.5	328.2	407.1	410.2	419.7
85°	110.4	205.1	224.0	220.9	224.0
87.5°	44.2	72.6	63.1	47.3	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)