

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: P387745

Luminaire Tested: **22CZ2-24HE-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: P387745  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24HE-SQR-UNV-L930-CD1-SWPD1-U  
Description: 2x2 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: 1890.6 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

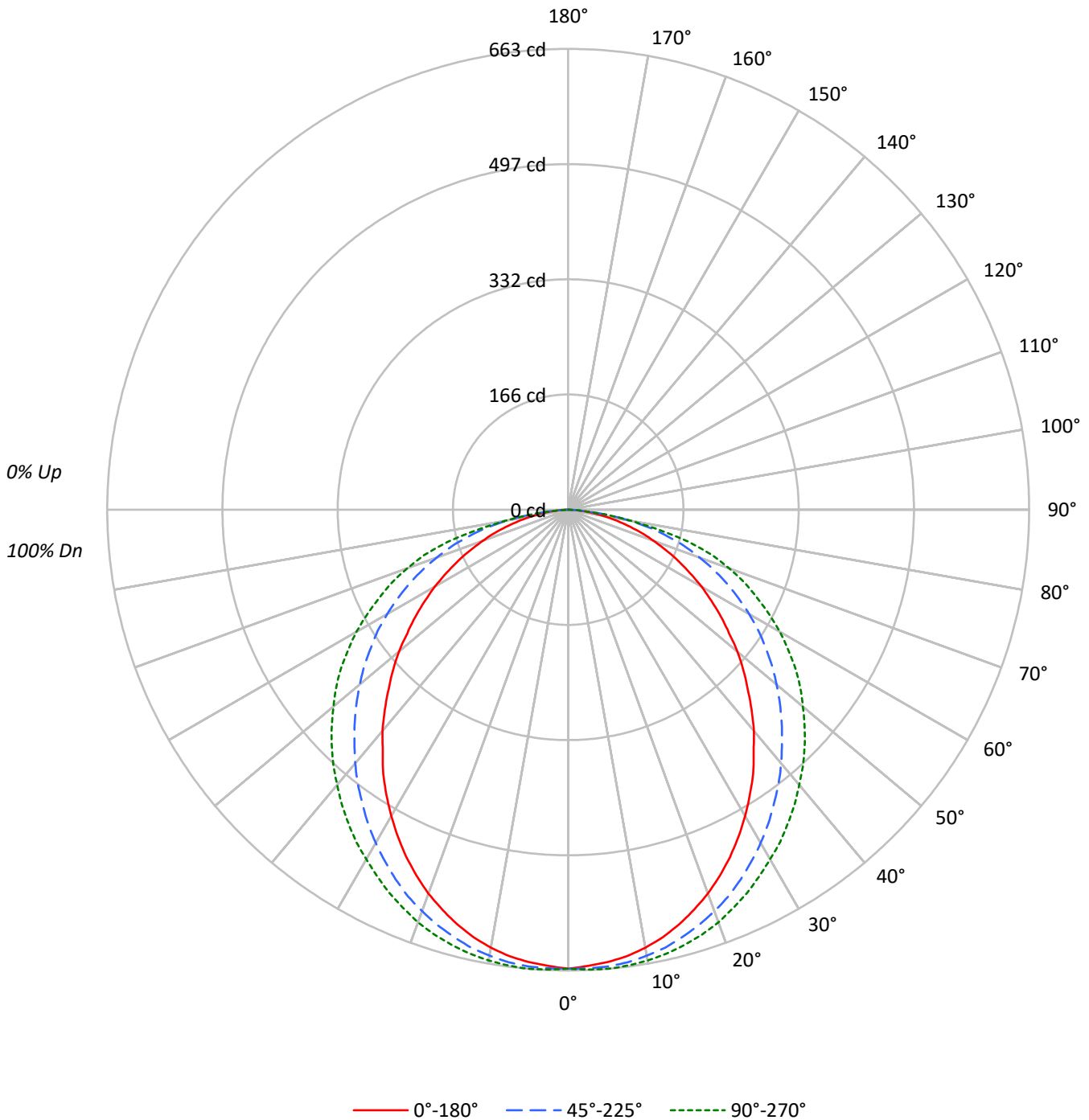
Input Watts (W): 19.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1777	1777	1777
5°	1765	1781	1791
10°	1748	1780	1800
15°	1720	1772	1805
20°	1683	1760	1809
25°	1636	1743	1806
30°	1581	1720	1804
35°	1524	1695	1810
40°	1460	1674	1816
45°	1390	1653	1831
50°	1330	1638	1845
55°	1259	1625	1873
60°	1193	1618	1893
65°	1114	1605	1908
70°	1024	1581	1935
75°	923	1540	1866
80°	792	1362	1404
85°	636	803	636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.6	3.3
10°-20°	179.0	9.5
20°-30°	268.9	14.2
30°-40°	320.7	17.0
40°-50°	331.5	17.5
50°-60°	304.8	16.1
60°-70°	242.6	12.8
70°-80°	148.3	7.8
80°-90°	32.2	1.7
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°	510.5	27.0
0°-40°	831.1	44.0
0°-60°	1467.5	77.6
0°-90°	1890.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1890.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	653	655	660	662	663	62
15°	617	624	636	645	648	174
25°	551	564	587	603	608	253
35°	464	484	516	543	551	289
45°	365	391	434	469	481	282
55°	268	298	346	386	399	240
65°	175	205	252	287	300	173
75°	89	115	148	174	180	95
85°	21	25	26	22	21	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	660.4	660.4	660.4	660.4	660.4
2.5°	656.8	657.7	660.4	662.2	662.2
5°	653.3	655.0	659.5	662.2	663.1
7.5°	647.9	650.6	656.8	660.4	661.3
10°	639.8	643.4	651.5	656.8	658.6
12.5°	629.9	635.3	645.2	652.4	654.2
15°	617.4	624.5	636.2	645.2	647.9
17.5°	603.0	612.0	626.3	637.1	640.7
20°	587.7	596.7	614.7	627.2	631.7
22.5°	569.8	581.5	602.1	616.5	620.1
25°	551.0	564.4	586.9	603.0	608.4
27.5°	530.3	546.5	570.7	590.4	594.9
30°	508.8	525.8	553.7	575.2	580.6
32.5°	486.4	506.1	535.7	559.9	567.1
35°	463.9	483.7	516.0	542.9	551.0
37.5°	437.9	461.2	497.1	524.9	534.8
40°	415.5	437.9	476.5	507.0	516.9
42.5°	390.3	414.6	454.9	488.1	499.8
45°	365.2	391.2	434.3	469.3	481.0
47.5°	341.9	367.9	412.8	449.6	461.2
50°	317.7	344.6	391.2	428.9	440.6
52.5°	291.6	321.2	369.7	407.4	420.8
55°	268.3	297.9	346.4	385.9	399.3
57.5°	244.1	274.6	324.8	362.5	375.1
60°	221.6	251.3	300.6	337.4	351.8
62.5°	197.4	227.9	276.4	312.3	325.7
65°	175.0	204.6	252.1	287.1	299.7
67.5°	152.5	182.2	227.0	260.2	274.6
70°	130.1	159.7	201.0	233.3	245.9
72.5°	110.4	136.4	175.9	205.5	217.2
75°	88.8	114.9	148.1	174.1	179.5
77.5°	69.1	92.4	120.2	131.9	133.7
80°	51.1	69.1	87.9	90.6	90.6
82.5°	34.1	47.6	54.7	55.6	54.7
85°	20.6	25.1	26.0	22.4	20.6
87.5°	7.2	7.2	4.5	2.7	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)