

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: P387746

Luminaire Tested: **22CZ2-24HE-SQR-UNV-L930-CD1-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: P387746  
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-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: 1914.4 lumens  
Efficiency: N/A  
Efficacy: 99.7 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

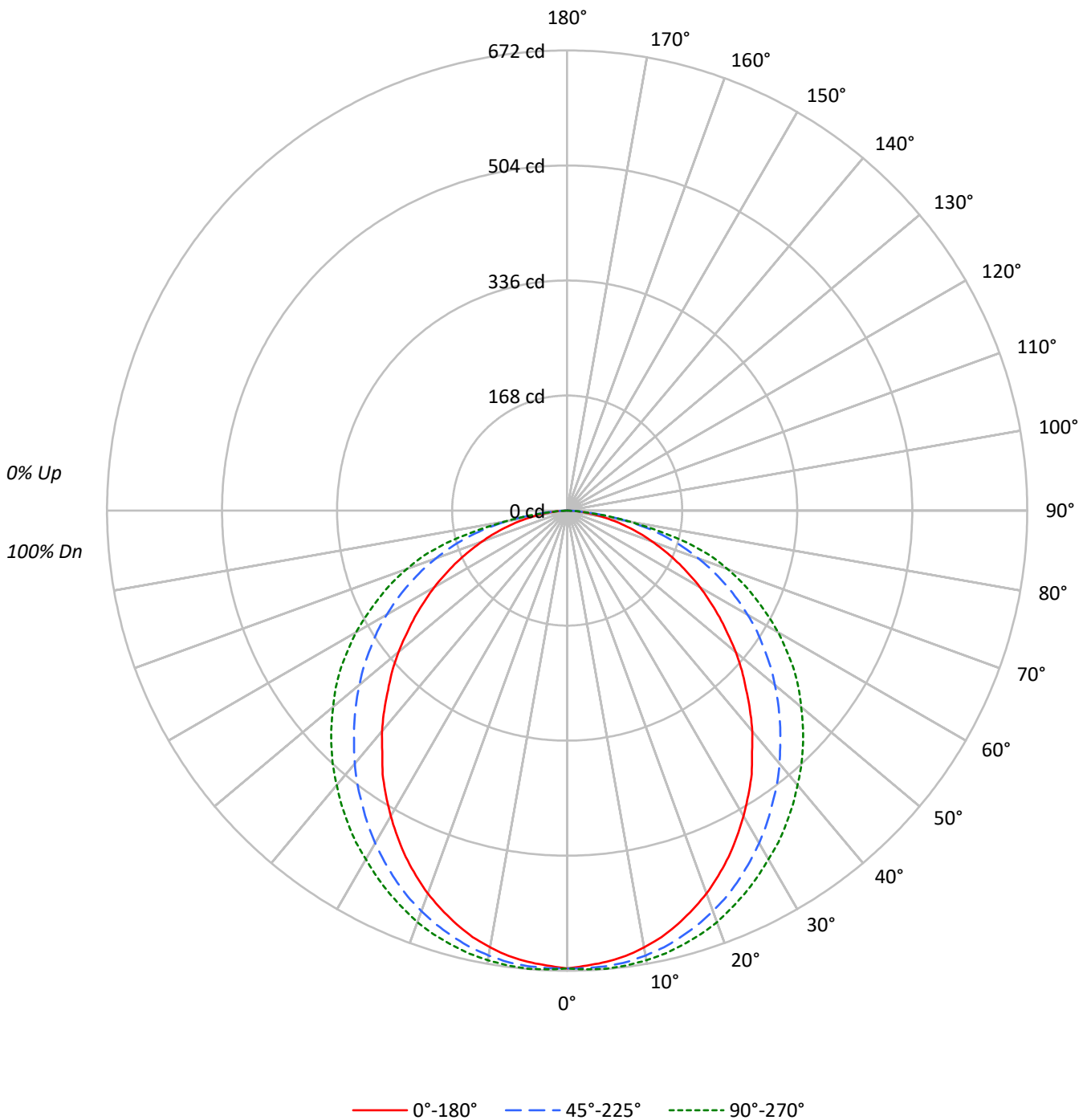
Input Watts (W): 19.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1799	1799	1799
5°	1787	1804	1814
10°	1770	1803	1822
15°	1741	1795	1828
20°	1704	1782	1832
25°	1656	1764	1829
30°	1601	1742	1827
35°	1543	1716	1833
40°	1478	1695	1839
45°	1407	1674	1853
50°	1347	1659	1868
55°	1275	1645	1897
60°	1208	1638	1917
65°	1128	1626	1933
70°	1037	1601	1959
75°	936	1559	1889
80°	803	1379	1423
85°	645	815	645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.4	3.3
10°-20°	181.3	9.5
20°-30°	272.2	14.2
30°-40°	324.7	17.0
40°-50°	335.7	17.5
50°-60°	308.6	16.1
60°-70°	245.7	12.8
70°-80°	150.1	7.8
80°-90°	32.6	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°	516.9	27.0
0°-40°	841.6	44.0
0°-60°	1485.9	77.6
0°-90°	1914.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1914.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	662	663	668	671	672	63
15°	625	632	644	653	656	176
25°	558	572	594	611	616	257
35°	470	490	522	550	558	293
45°	370	396	440	475	487	286
55°	272	302	351	391	404	243
65°	177	207	255	291	304	176
75°	90	116	150	176	182	96
85°	21	25	26	23	21	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	668.7	668.7	668.7	668.7	668.7
2.5°	665.1	666.0	668.7	670.6	670.6
5°	661.5	663.3	667.8	670.6	671.5
7.5°	656.0	658.8	665.1	668.7	669.7
10°	647.8	651.5	659.7	665.1	666.9
12.5°	637.9	643.3	653.3	660.6	662.4
15°	625.1	632.4	644.2	653.3	656.0
17.5°	610.6	619.7	634.2	645.1	648.8
20°	595.1	604.2	622.4	635.1	639.7
22.5°	577.0	588.8	609.7	624.2	627.9
25°	557.9	571.5	594.2	610.6	616.0
27.5°	537.0	553.4	577.9	597.9	602.4
30°	515.2	532.5	560.6	582.4	587.9
32.5°	492.5	512.5	542.4	567.0	574.2
35°	469.8	489.7	522.5	549.7	557.9
37.5°	443.4	467.0	503.4	531.5	541.5
40°	420.7	443.4	482.5	513.4	523.4
42.5°	395.3	419.8	460.7	494.3	506.1
45°	369.8	396.2	439.8	475.2	487.0
47.5°	346.2	372.5	418.0	455.2	467.0
50°	321.7	348.9	396.2	434.3	446.1
52.5°	295.3	325.3	374.4	412.5	426.1
55°	271.7	301.7	350.7	390.7	404.3
57.5°	247.1	278.0	328.9	367.1	379.8
60°	224.4	254.4	304.4	341.6	356.2
62.5°	199.9	230.8	279.9	316.2	329.8
65°	177.2	207.2	255.3	290.8	303.5
67.5°	154.5	184.5	229.9	263.5	278.0
70°	131.8	161.7	203.5	236.2	249.0
72.5°	111.8	138.1	178.1	208.1	219.9
75°	90.0	116.3	149.9	176.3	181.7
77.5°	70.0	93.6	121.8	133.6	135.4
80°	51.8	70.0	89.0	91.8	91.8
82.5°	34.5	48.2	55.4	56.3	55.4
85°	20.9	25.4	26.4	22.7	20.9
87.5°	7.3	7.3	4.5	2.7	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)