

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: P277352

Luminaire Tested: **22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277352  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1949.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

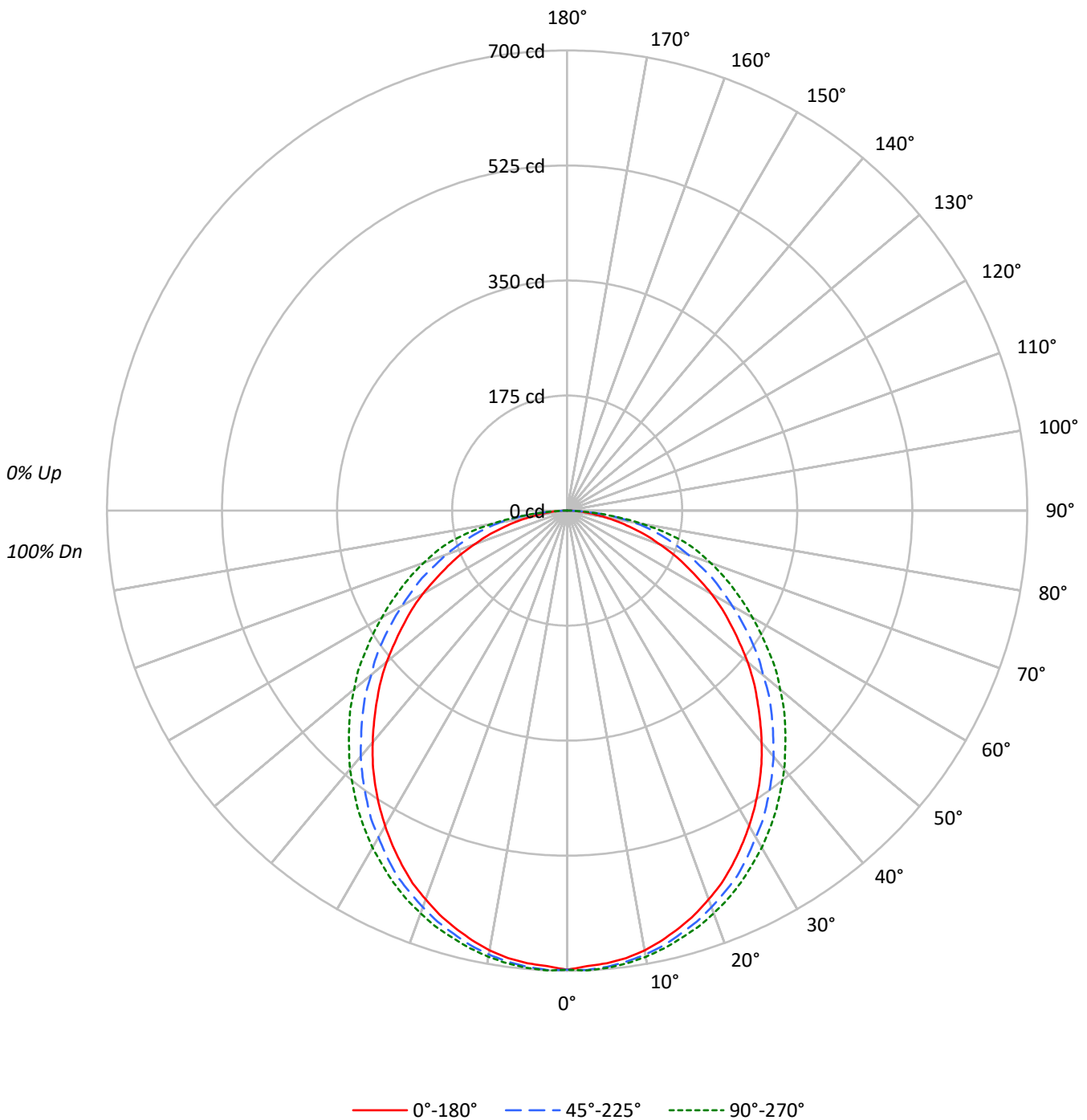
Input Watts (W): 15.934806  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P277352

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P277352

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K

**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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	1879	1879	1879
5°	1867	1882	1887
10°	1856	1874	1884
15°	1832	1857	1875
20°	1802	1838	1867
25°	1766	1820	1855
30°	1721	1783	1840
35°	1673	1751	1822
40°	1616	1715	1805
45°	1557	1675	1786
50°	1500	1629	1770
55°	1429	1600	1758
60°	1365	1561	1752
65°	1274	1552	1772
70°	1173	1538	1825
75°	1058	1560	1919
80°	916	1607	1804
85°	760	1346	1346



TEST NUMBER: P277352

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.0	3.4
10°-20°	188.0	9.6
20°-30°	281.2	14.4
30°-40°	333.0	17.1
40°-50°	339.4	17.4
50°-60°	304.2	15.6
60°-70°	238.2	12.2
70°-80°	153.6	7.9
80°-90°	45.4	2.3
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°	535.2	27.5
0°-40°	868.3	44.5
0°-60°	1511.9	77.6
0°-90°	1949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1949.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	691	693	697	698	698	66
15°	658	661	667	672	673	185
25°	595	600	613	621	625	274
35°	509	516	533	549	555	318
45°	409	418	440	463	469	316
55°	305	315	341	365	375	273
65°	200	212	244	267	278	199
75°	102	117	150	176	185	109
85°	25	34	44	44	44	29
90°	0	0	0	0	0	



TEST NUMBER: P277352

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L93050-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	698.4	698.4	698.4	698.4	698.4
2.5°	693.8	695.7	699.3	700.2	700.2
5°	691.1	692.9	696.6	697.5	698.4
7.5°	686.6	687.5	692.0	693.8	694.8
10°	679.3	681.1	685.7	688.4	689.3
12.5°	669.3	672.0	677.5	681.1	682.0
15°	657.5	661.1	666.6	672.0	672.9
17.5°	644.7	648.4	655.6	662.0	663.8
20°	629.3	633.8	642.0	649.3	652.0
22.5°	613.8	617.5	627.5	636.6	639.3
25°	594.7	600.2	612.9	621.1	624.7
27.5°	574.7	581.1	593.8	604.7	608.4
30°	553.8	560.2	573.8	587.4	592.0
32.5°	532.0	539.2	555.6	569.3	573.8
35°	509.2	515.6	532.9	549.3	554.7
37.5°	485.6	491.1	511.1	528.3	533.8
40°	460.1	467.4	488.3	508.3	513.8
42.5°	434.7	442.9	463.8	485.6	491.1
45°	409.2	418.3	440.1	462.9	469.2
47.5°	384.7	391.9	416.5	438.3	447.4
50°	358.3	365.6	389.2	413.8	422.9
52.5°	331.0	341.0	366.5	390.1	401.0
55°	304.6	314.6	341.0	364.7	374.7
57.5°	280.1	288.3	315.5	340.1	350.1
60°	253.7	261.0	290.1	316.5	325.6
62.5°	225.5	236.4	266.4	291.0	301.9
65°	200.1	211.9	243.7	267.4	278.3
67.5°	176.4	187.3	218.2	243.7	255.5
70°	149.1	163.7	195.5	221.0	231.9
72.5°	127.3	140.0	172.8	198.2	210.1
75°	101.8	117.3	150.0	175.5	184.6
77.5°	80.9	96.4	127.3	147.3	151.9
80°	59.1	74.6	103.7	113.7	116.4
82.5°	40.0	54.6	74.6	77.3	78.2
85°	24.6	33.6	43.6	43.6	43.6
87.5°	11.8	13.6	15.5	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)