

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: P474888

Luminaire Tested: **22CZ2-20VHE-S-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474888  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20VHE-S-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2004.1 lumens  
Efficiency: N/A  
Efficacy: 145.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

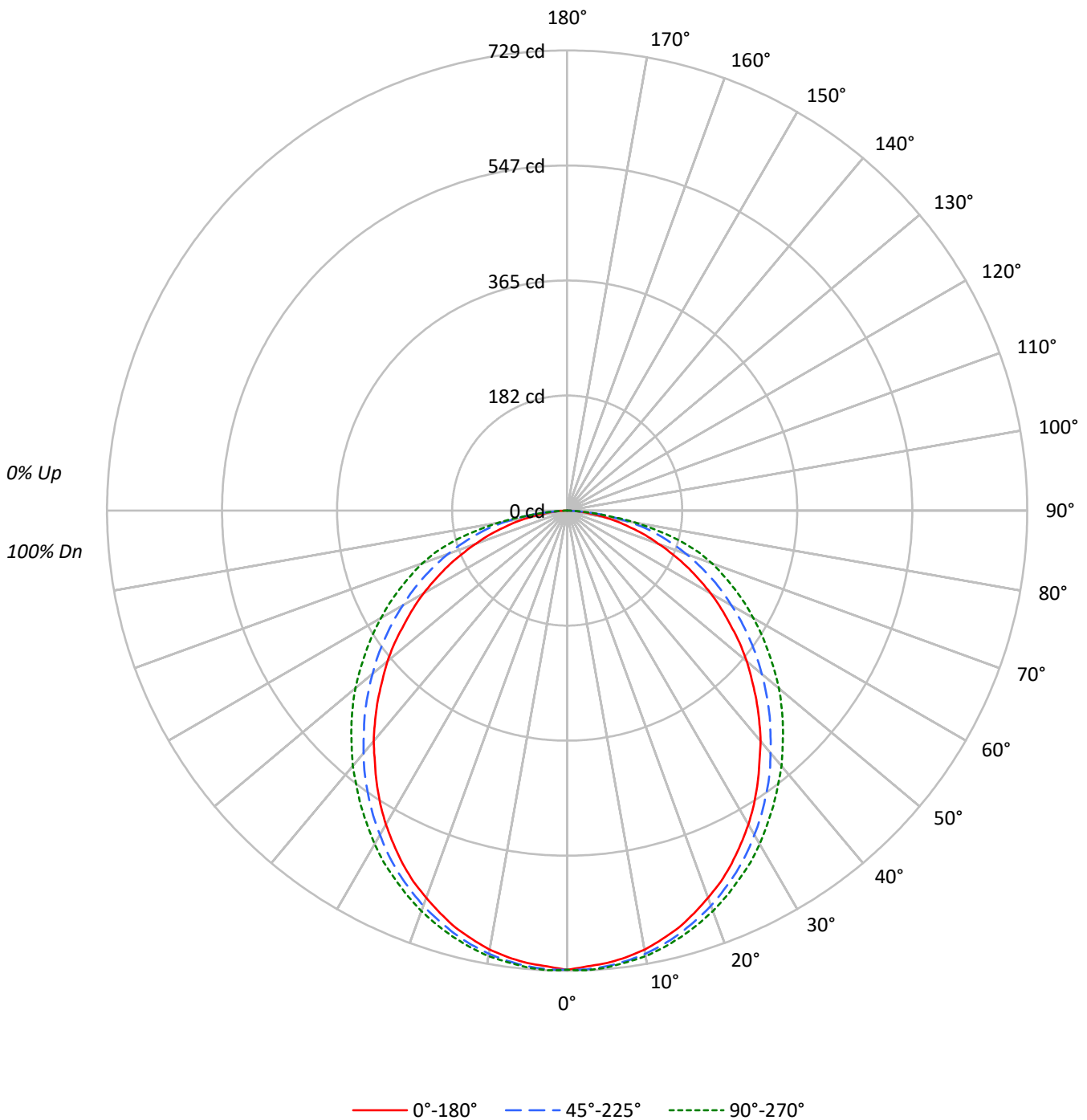
Input Watts (W): 13.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	88	86	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	1958	1958	1958
5°	1944	1957	1962
10°	1930	1948	1959
15°	1905	1931	1947
20°	1869	1908	1933
25°	1832	1879	1914
30°	1784	1843	1896
35°	1729	1805	1872
40°	1675	1762	1855
45°	1613	1724	1840
50°	1555	1685	1834
55°	1481	1652	1825
60°	1415	1618	1833
65°	1328	1599	1859
70°	1213	1580	1920
75°	1090	1568	1921
80°	917	1480	1706
85°	689	1003	929



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	3.4
10°-20°	195.1	9.7
20°-30°	290.9	14.5
30°-40°	343.3	17.1
40°-50°	349.8	17.5
50°-60°	315.4	15.7
60°-70°	247.7	12.4
70°-80°	154.9	7.7
80°-90°	38.2	1.9
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°	554.8	27.7
0°-40°	898.1	44.8
0°-60°	1563.4	78.0
0°-90°	2004.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2004.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	720	721	725	726	726	68
15°	684	686	693	698	699	193
25°	617	620	633	642	645	284
35°	526	534	550	564	570	329
45°	424	431	453	475	484	327
55°	316	326	352	379	389	283
65°	209	220	251	279	292	206
75°	105	119	151	176	185	112
85°	22	29	32	32	30	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	727.5	727.5	727.5	727.5	727.5
2.5°	722.7	724.1	727.5	729.0	729.0
5°	719.7	721.2	724.6	726.1	726.5
7.5°	713.9	715.9	719.7	721.7	721.7
10°	706.2	708.6	713.0	715.9	716.8
12.5°	695.5	698.4	704.2	707.6	708.6
15°	683.9	686.3	693.1	697.9	698.9
17.5°	668.8	672.7	680.0	686.3	687.7
20°	652.8	657.2	666.4	673.7	675.1
22.5°	636.3	639.7	649.9	658.6	660.6
25°	616.9	620.3	632.9	642.1	644.6
27.5°	595.6	601.4	614.0	624.7	628.6
30°	574.2	580.1	593.2	605.8	610.1
32.5°	551.0	557.3	572.3	585.4	589.8
35°	526.2	533.5	549.5	564.5	569.9
37.5°	500.5	508.8	526.7	542.7	548.5
40°	476.8	482.6	501.5	519.9	528.2
42.5°	450.1	457.8	476.8	497.6	505.4
45°	423.9	431.2	453.0	474.8	483.5
47.5°	396.7	405.9	427.8	452.0	460.8
50°	371.5	379.3	402.6	428.3	438.0
52.5°	344.4	352.6	377.8	404.5	413.2
55°	315.7	325.9	352.1	379.3	389.0
57.5°	289.5	299.2	326.9	355.0	365.2
60°	262.9	272.6	300.7	329.3	340.5
62.5°	234.7	245.9	276.5	304.1	316.7
65°	208.6	219.7	251.2	279.4	292.0
67.5°	180.9	194.0	225.5	255.1	267.7
70°	154.2	169.8	200.8	229.9	244.0
72.5°	130.5	143.1	175.6	206.1	217.8
75°	104.8	119.3	150.8	176.5	184.8
77.5°	82.9	95.5	125.6	142.6	147.9
80°	59.2	73.2	95.5	105.7	110.1
82.5°	39.3	50.9	65.0	66.9	66.0
85°	22.3	28.6	32.5	32.0	30.1
87.5°	8.7	9.7	7.3	4.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)