

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: P474582

Luminaire Tested: **24CZ2-30VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474582  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30VHE-SQR-UNV-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2781.6 lumens  
Efficiency: N/A  
Efficacy: 135.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

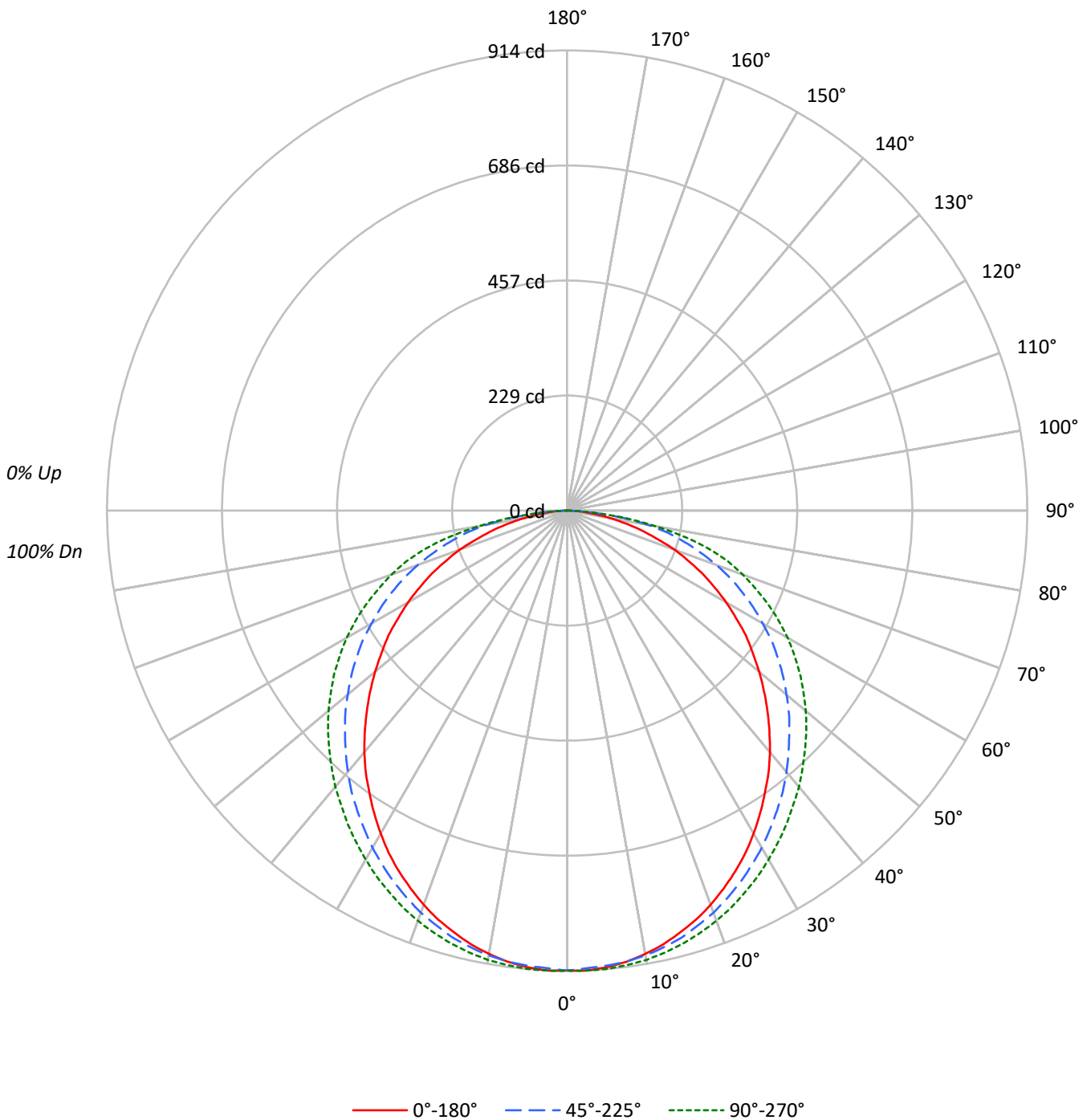
Input Watts (W): 20.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90		92	90	87		89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	43	38		49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34		46	39	34		44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27		39	32	27		38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		35	29	24	23

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

	0°	45°	90°
0°	2459	2459	2459
5°	2458	2451	2468
10°	2443	2452	2476
15°	2416	2446	2480
20°	2386	2434	2483
25°	2347	2417	2483
30°	2302	2403	2487
35°	2250	2388	2496
40°	2201	2381	2517
45°	2141	2374	2544
50°	2084	2381	2590
55°	2035	2397	2648
60°	1966	2415	2722
65°	1887	2445	2804
70°	1790	2479	2916
75°	1603	2513	3012
80°	1350	2520	2734
85°	1000	1908	1797



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.6	3.1
10°-20°	248.1	8.9
20°-30°	375.6	13.5
30°-40°	454.4	16.3
40°-50°	479.7	17.2
50°-60°	452.3	16.3
60°-70°	372.9	13.4
70°-80°	244.6	8.8
80°-90°	67.3	2.4
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°	710.4	25.5
0°-40°	1164.8	41.9
0°-60°	2096.8	75.4
0°-90°	2781.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2781.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	910	910	907	914	914	86
15°	867	872	878	888	890	245
25°	791	800	814	831	836	364
35°	685	703	727	752	760	429
45°	563	588	624	657	668	434
55°	434	464	511	549	564	386
65°	296	332	384	425	440	293
75°	154	194	242	280	290	163
85°	32	56	62	60	58	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	913.7	913.7	913.7	913.7	913.7
2.5°	914.5	913.7	909.7	915.0	914.5
5°	910.1	910.1	907.4	913.7	913.7
7.5°	903.9	904.3	903.4	910.5	910.5
10°	894.1	895.9	897.2	905.2	906.1
12.5°	882.6	885.7	888.3	898.1	899.0
15°	867.4	872.3	878.1	888.3	890.1
17.5°	851.9	857.7	863.9	877.2	879.4
20°	833.2	839.9	850.1	863.4	867.0
22.5°	812.3	821.7	832.3	848.3	852.8
25°	790.6	800.3	814.1	831.0	836.3
27.5°	767.0	778.6	794.1	813.7	819.5
30°	740.8	754.1	773.2	794.1	800.3
32.5°	713.2	728.8	750.1	773.2	780.3
35°	684.8	702.6	727.0	751.9	759.9
37.5°	656.8	674.6	703.5	729.7	737.2
40°	626.6	646.1	677.7	705.7	716.4
42.5°	594.6	617.7	651.0	682.1	692.4
45°	562.6	587.9	623.9	657.2	668.4
47.5°	530.2	558.2	597.7	631.5	644.4
50°	497.7	527.5	568.8	605.3	618.6
52.5°	464.8	495.9	540.8	579.5	591.5
55°	433.7	464.4	511.0	549.3	564.4
57.5°	397.7	432.4	481.7	520.4	535.0
60°	365.3	399.1	448.8	489.7	505.7
62.5°	330.2	364.8	417.3	458.2	473.7
65°	296.4	332.0	384.0	424.8	440.4
67.5°	260.0	297.3	350.6	390.2	405.3
70°	227.5	262.6	315.1	355.5	370.6
72.5°	188.0	228.0	278.2	318.2	334.6
75°	154.2	193.8	241.7	280.0	289.7
77.5°	118.7	158.2	205.8	230.6	237.3
80°	87.1	124.4	162.6	176.0	176.4
82.5°	58.7	91.5	113.3	120.0	119.1
85°	32.4	56.0	61.8	60.0	58.2
87.5°	13.3	18.7	15.1	10.7	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)