

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: P474884

Luminaire Tested: **22CZ2-29HE-S-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474884  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29HE-S-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2935.3 lumens  
Efficiency: N/A  
Efficacy: 140.4 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

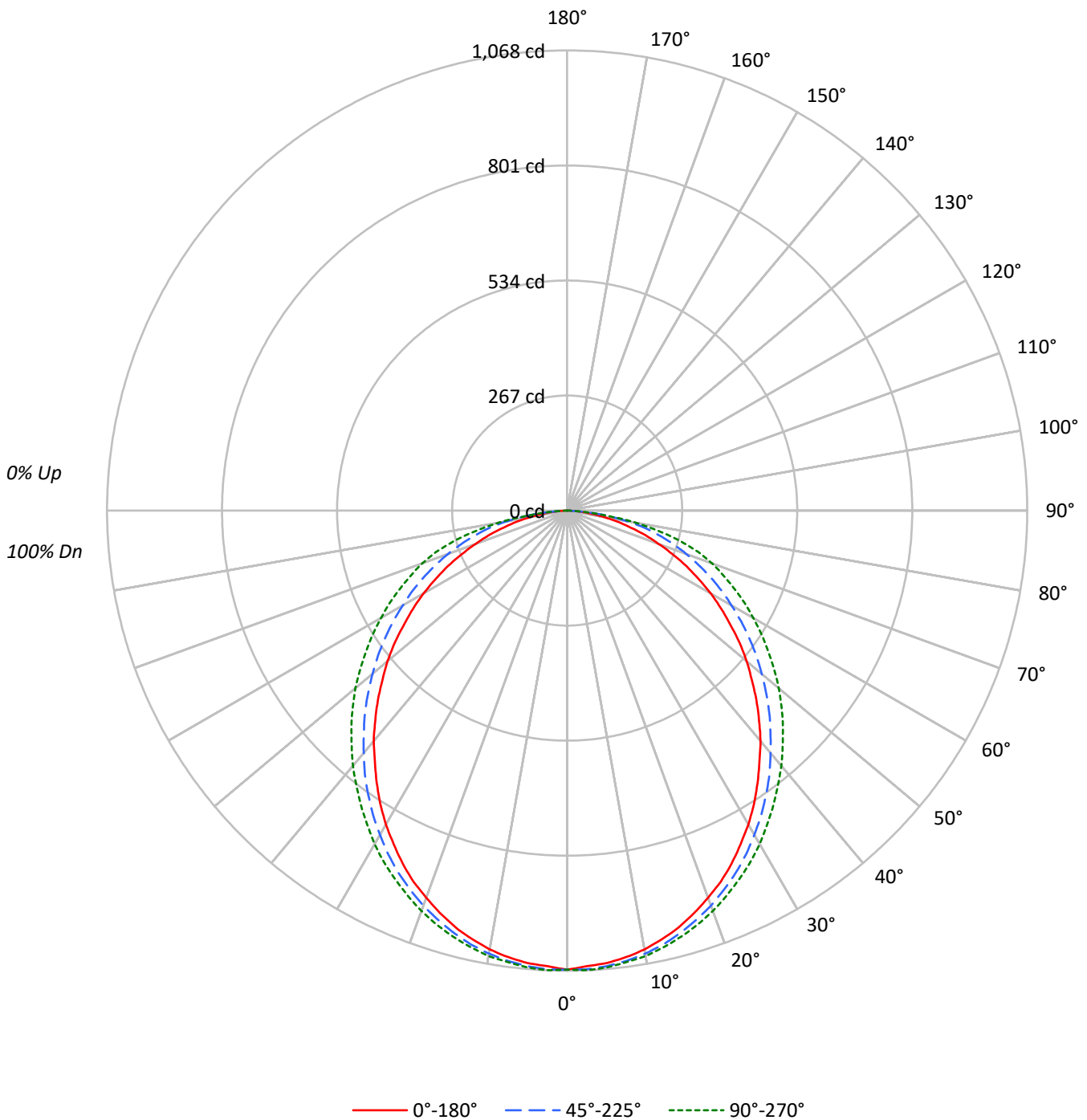
Input Watts (W): 20.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474884

CATALOG NUMBER: 22CZ2-29HE-S-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474884

CATALOG NUMBER: 22CZ2-29HE-S-UNV-L830-CD1-U

**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°	2867	2867	2867
5°	2848	2867	2874
10°	2826	2853	2869
15°	2790	2828	2852
20°	2738	2795	2832
25°	2683	2752	2803
30°	2614	2700	2777
35°	2532	2644	2742
40°	2453	2580	2718
45°	2363	2525	2695
50°	2278	2468	2685
55°	2169	2419	2673
60°	2072	2370	2684
65°	1945	2343	2723
70°	1777	2314	2811
75°	1595	2297	2813
80°	1344	2168	2500
85°	1010	1470	1359



TEST NUMBER: P474884

CATALOG NUMBER: 22CZ2-29HE-S-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.6	3.4
10°-20°	285.8	9.7
20°-30°	426.1	14.5
30°-40°	502.8	17.1
40°-50°	512.3	17.5
50°-60°	462.0	15.7
60°-70°	362.8	12.4
70°-80°	226.8	7.7
80°-90°	55.9	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°	812.6	27.7
0°-40°	1315.4	44.8
0°-60°	2289.7	78.0
0°-90°	2935.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2935.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1054	1056	1061	1063	1064	100
15°	1002	1005	1015	1022	1024	282
25°	904	908	927	940	944	416
35°	771	781	805	827	835	482
45°	621	632	664	695	708	479
55°	462	477	516	556	570	415
65°	306	322	368	409	428	302
75°	153	175	221	259	271	164
85°	33	42	48	47	44	40
90°	0	0	0	0	0	



TEST NUMBER: P474884

CATALOG NUMBER: 22CZ2-29HE-S-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1065.5	1065.5	1065.5	1065.5	1065.5
2.5°	1058.4	1060.6	1065.5	1067.7	1067.7
5°	1054.2	1056.3	1061.3	1063.4	1064.1
7.5°	1045.6	1048.5	1054.2	1057.0	1057.0
10°	1034.3	1037.8	1044.2	1048.5	1049.9
12.5°	1018.6	1022.9	1031.4	1036.4	1037.8
15°	1001.6	1005.2	1015.1	1022.2	1023.6
17.5°	979.6	985.3	995.9	1005.2	1007.3
20°	956.1	962.5	976.0	986.7	988.8
22.5°	932.0	937.0	951.9	964.7	967.5
25°	903.6	908.5	927.0	940.5	944.1
27.5°	872.3	880.8	899.3	914.9	920.6
30°	841.1	849.6	868.8	887.2	893.6
32.5°	807.0	816.2	838.2	857.4	863.8
35°	770.7	781.4	804.8	826.9	834.7
37.5°	733.1	745.2	771.4	794.9	803.4
40°	698.3	706.8	734.5	761.5	773.6
42.5°	659.2	670.6	698.3	728.8	740.2
45°	620.8	631.5	663.5	695.4	708.2
47.5°	581.1	594.6	626.5	662.0	674.8
50°	544.1	555.5	589.6	627.2	641.4
52.5°	504.4	516.4	553.4	592.4	605.2
55°	462.4	477.4	515.7	555.5	569.7
57.5°	424.1	438.3	478.8	520.0	534.9
60°	385.0	399.2	440.4	482.3	498.7
62.5°	343.8	360.1	404.9	445.4	463.9
65°	305.5	321.8	368.0	409.2	427.6
67.5°	265.0	284.1	330.3	373.6	392.1
70°	225.9	248.6	294.1	336.7	357.3
72.5°	191.1	209.6	257.1	301.9	318.9
75°	153.4	174.7	220.9	258.6	270.6
77.5°	121.5	139.9	184.0	208.8	216.7
80°	86.7	107.3	139.9	154.9	161.3
82.5°	57.5	74.6	95.2	98.0	96.6
85°	32.7	41.9	47.6	46.9	44.0
87.5°	12.8	14.2	10.7	6.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)