

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: P474683

Luminaire Tested: **24CZ2-35VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474683  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35VHE-SQR-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3429.0 lumens  
Efficiency: N/A  
Efficacy: 143.5 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

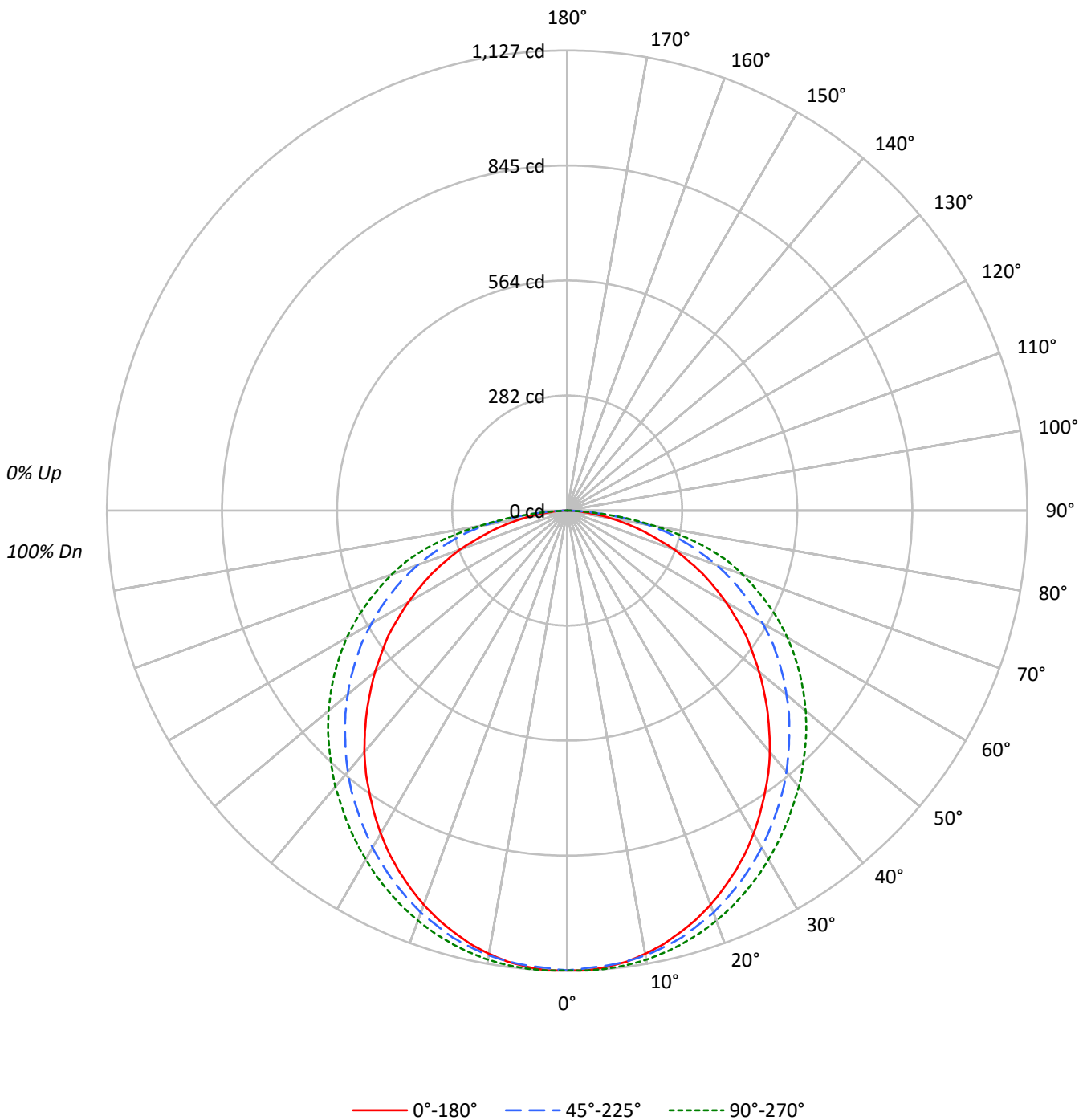
Input Watts (W): 23.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3031	3031	3031
5°	3031	3022	3042
10°	3012	3022	3052
15°	2979	3016	3057
20°	2942	3001	3061
25°	2894	2980	3061
30°	2838	2962	3066
35°	2773	2944	3077
40°	2713	2935	3102
45°	2639	2927	3135
50°	2569	2936	3193
55°	2509	2956	3264
60°	2423	2978	3355
65°	2327	3014	3457
70°	2207	3056	3595
75°	1976	3098	3714
80°	1664	3107	3371
85°	1235	2350	2217



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.7	3.1
10°-20°	305.9	8.9
20°-30°	463.1	13.5
30°-40°	560.2	16.3
40°-50°	591.3	17.2
50°-60°	557.6	16.3
60°-70°	459.7	13.4
70°-80°	301.6	8.8
80°-90°	82.9	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°	875.7	25.5
0°-40°	1435.9	41.9
0°-60°	2584.8	75.4
0°-90°	3429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3429.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1122	1122	1119	1126	1126	106
15°	1069	1075	1082	1095	1097	302
25°	975	987	1004	1024	1031	449
35°	844	866	896	927	937	528
45°	694	725	769	810	824	535
55°	535	572	630	677	696	476
65°	365	409	473	524	543	361
75°	190	239	298	345	357	201
85°	40	69	76	74	72	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1126.3	1126.3	1126.3	1126.3	1126.3
2.5°	1127.4	1126.3	1121.4	1128.0	1127.4
5°	1121.9	1121.9	1118.7	1126.3	1126.3
7.5°	1114.3	1114.8	1113.7	1122.5	1122.5
10°	1102.2	1104.4	1106.1	1115.9	1117.0
12.5°	1088.0	1091.8	1095.1	1107.2	1108.2
15°	1069.4	1075.4	1082.5	1095.1	1097.3
17.5°	1050.2	1057.3	1065.0	1081.4	1084.1
20°	1027.2	1035.4	1048.0	1064.4	1068.8
22.5°	1001.4	1012.9	1026.1	1045.8	1051.3
25°	974.6	986.6	1003.6	1024.4	1031.0
27.5°	945.5	959.8	979.0	1003.1	1010.2
30°	913.2	929.7	953.2	979.0	986.6
32.5°	879.3	898.4	924.7	953.2	962.0
35°	844.2	866.1	896.2	926.9	936.8
37.5°	809.7	831.6	867.2	899.5	908.8
40°	772.4	796.5	835.4	869.9	883.1
42.5°	733.0	761.5	802.6	840.9	853.5
45°	693.5	724.8	769.1	810.2	823.9
47.5°	653.6	688.1	736.8	778.5	794.3
50°	613.6	650.3	701.2	746.1	762.6
52.5°	573.0	611.4	666.7	714.4	729.2
55°	534.7	572.5	630.0	677.1	695.7
57.5°	490.3	533.0	593.8	641.5	659.6
60°	450.3	491.9	553.3	603.7	623.4
62.5°	407.0	449.8	514.4	564.8	584.0
65°	365.4	409.2	473.3	523.7	542.9
67.5°	320.5	366.5	432.2	481.0	499.6
70°	280.5	323.8	388.4	438.3	456.9
72.5°	231.7	281.0	342.9	392.2	412.5
75°	190.1	238.9	298.0	345.1	357.2
77.5°	146.3	195.0	253.6	284.3	292.5
80°	107.4	153.4	200.5	216.9	217.5
82.5°	72.3	112.9	139.7	147.9	146.8
85°	40.0	69.0	76.1	74.0	71.8
87.5°	16.4	23.0	18.6	13.1	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)