

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: P474753

Luminaire Tested: **24CZ2-145VHE-SQR-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474753  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-145VHE-SQR-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14045.3 lumens  
Efficiency: N/A  
Efficacy: 133.4 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

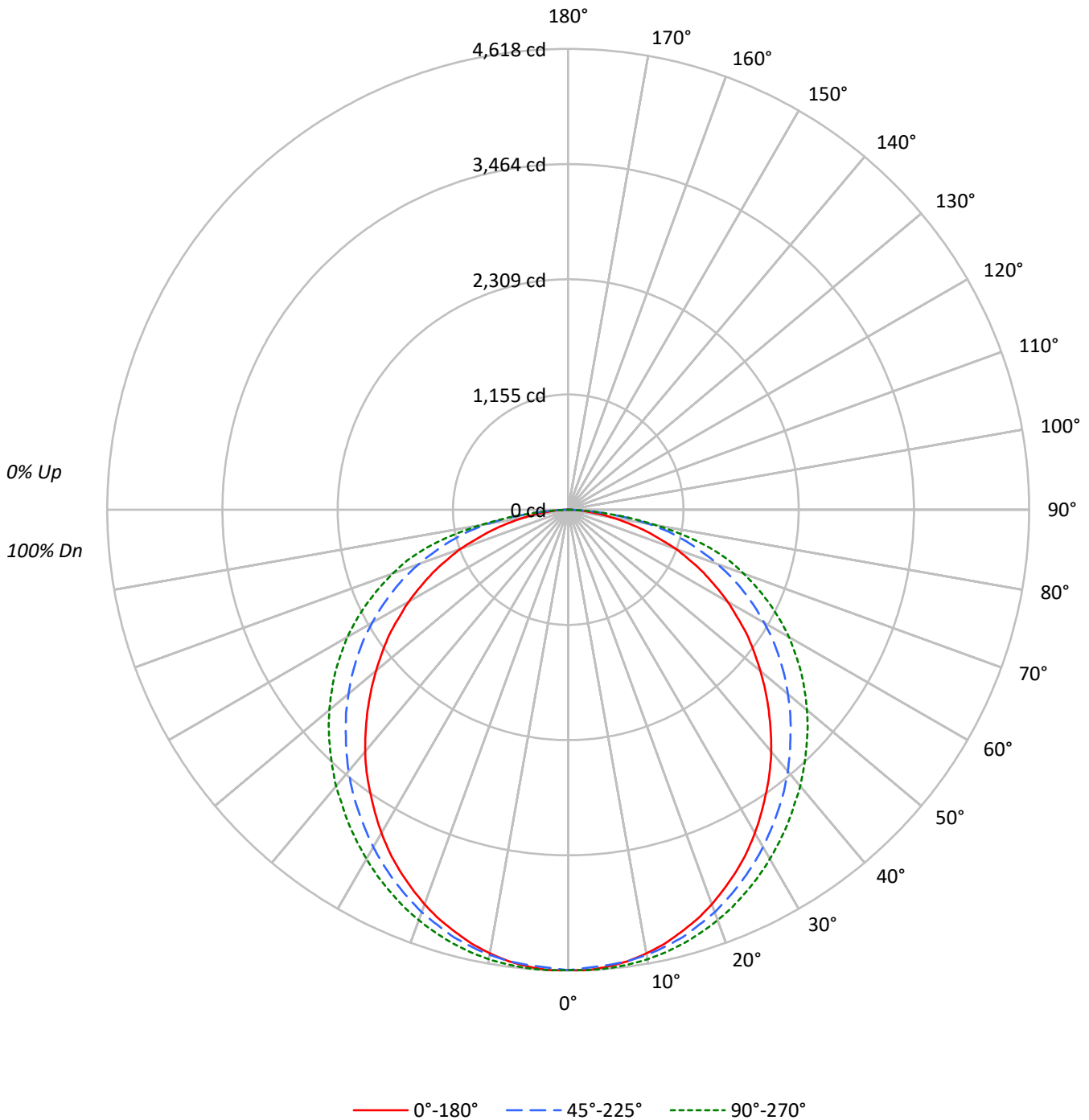
Input Watts (W): 105.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	12415	12415	12415
5°	12414	12377	12462
10°	12336	12379	12502
15°	12203	12352	12521
20°	12048	12292	12537
25°	11853	12206	12539
30°	11623	12132	12557
35°	11359	12060	12605
40°	11114	12021	12706
45°	10811	11989	12843
50°	10521	12024	13076
55°	10275	12107	13370
60°	9927	12197	13743
65°	9530	12344	14159
70°	9039	12517	14724
75°	8095	12692	15211
80°	6815	12727	13804
85°	5057	9630	9074



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	437.2	3.1
10°-20°	1253.0	8.9
20°-30°	1896.7	13.5
30°-40°	2294.5	16.3
40°-50°	2422.0	17.2
50°-60°	2284.0	16.3
60°-70°	1883.0	13.4
70°-80°	1235.3	8.8
80°-90°	339.6	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°	3586.9	25.5
0°-40°	5881.4	41.9
0°-60°	10587.4	75.4
0°-90°	14045.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14045.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4613	4613	4613	4613	4613	
5°	4596	4596	4582	4613	4613	436
15°	4380	4405	4434	4486	4494	1236
25°	3992	4041	4111	4196	4223	1838
35°	3458	3548	3671	3797	3837	2165
45°	2841	2969	3150	3319	3375	2192
55°	2190	2345	2580	2773	2850	1951
65°	1497	1676	1939	2145	2224	1478
75°	779	978	1221	1414	1463	823
85°	164	283	312	303	294	203
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4613.4	4613.4	4613.4	4613.4	4613.4
2.5°	4617.9	4613.4	4593.2	4620.2	4617.9
5°	4595.5	4595.5	4582.0	4613.4	4613.4
7.5°	4564.1	4566.3	4561.8	4597.7	4597.7
10°	4514.7	4523.7	4530.4	4570.8	4575.3
12.5°	4456.4	4472.1	4485.5	4534.9	4539.4
15°	4380.1	4404.7	4433.9	4485.5	4494.5
17.5°	4301.5	4330.7	4362.1	4429.4	4440.6
20°	4207.3	4240.9	4292.5	4359.9	4377.8
22.5°	4101.8	4148.9	4202.8	4283.6	4306.0
25°	3991.9	4041.2	4110.8	4196.1	4223.0
27.5°	3872.9	3931.3	4009.8	4108.6	4137.7
30°	3740.6	3807.9	3904.4	4009.8	4041.2
32.5°	3601.4	3680.0	3787.7	3904.4	3940.3
35°	3457.8	3547.6	3671.0	3796.7	3837.0
37.5°	3316.5	3406.2	3552.1	3684.5	3722.6
40°	3163.9	3262.6	3421.9	3563.3	3617.1
42.5°	3002.3	3119.0	3287.3	3444.4	3496.0
45°	2840.8	2968.7	3150.4	3318.7	3374.8
47.5°	2677.0	2818.3	3018.0	3188.6	3253.6
50°	2513.1	2663.5	2872.2	3056.2	3123.5
52.5°	2347.1	2504.2	2730.8	2926.0	2986.6
55°	2190.0	2344.9	2580.5	2773.4	2849.7
57.5°	2008.3	2183.3	2432.4	2627.6	2701.6
60°	1844.5	2015.0	2266.3	2472.8	2553.5
62.5°	1667.2	1842.2	2107.0	2313.4	2392.0
65°	1496.7	1676.2	1938.7	2145.2	2223.7
67.5°	1312.7	1501.2	1770.4	1970.1	2046.4
70°	1148.9	1326.1	1590.9	1795.1	1871.4
72.5°	949.2	1151.1	1404.7	1606.6	1689.6
75°	778.6	978.3	1220.7	1413.6	1463.0
77.5°	599.1	798.8	1038.9	1164.6	1198.2
80°	439.8	628.3	821.3	888.6	890.8
82.5°	296.2	462.2	572.2	605.8	601.4
85°	163.8	282.7	311.9	302.9	293.9
87.5°	67.3	94.2	76.3	53.9	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)