

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: P474645

Luminaire Tested: **24CZ2-105VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474645  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-105VHE-SQR-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10051.6 lumens  
Efficiency: N/A  
Efficacy: 132.8 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

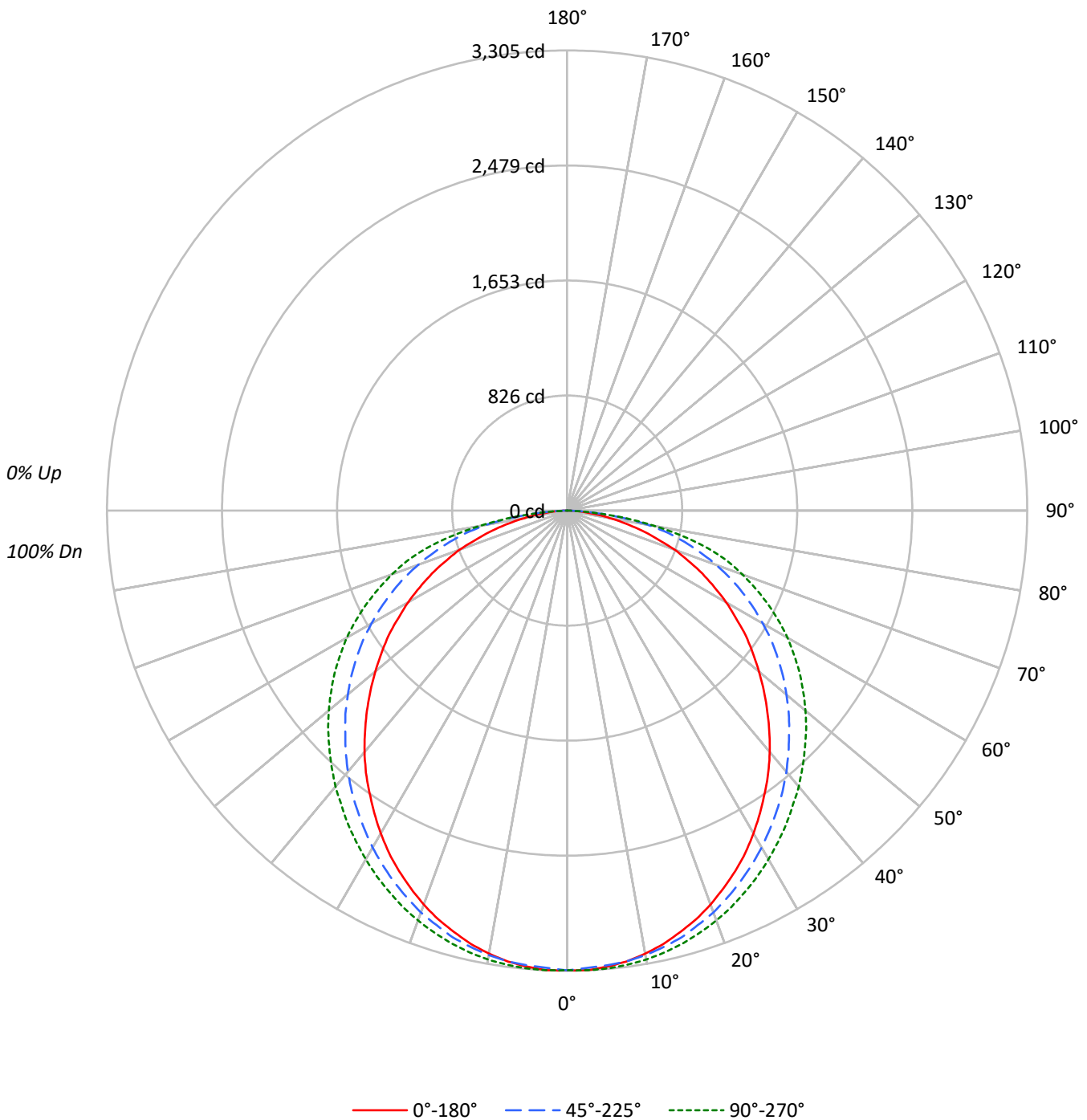
Input Watts (W): 75.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	8885	8885	8885
5°	8884	8858	8918
10°	8829	8859	8947
15°	8733	8840	8961
20°	8623	8797	8972
25°	8482	8735	8973
30°	8318	8682	8987
35°	8129	8631	9021
40°	7954	8603	9093
45°	7737	8580	9191
50°	7529	8605	9358
55°	7353	8664	9568
60°	7104	8729	9836
65°	6820	8835	10133
70°	6469	8958	10537
75°	5793	9083	10886
80°	4877	9107	9879
85°	3619	6891	6496



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.9	3.1
10°-20°	896.7	8.9
20°-30°	1357.4	13.5
30°-40°	1642.1	16.3
40°-50°	1733.3	17.2
50°-60°	1634.5	16.3
60°-70°	1347.6	13.4
70°-80°	884.0	8.8
80°-90°	243.1	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°	2567.0	25.5
0°-40°	4209.1	41.9
0°-60°	7576.9	75.4
0°-90°	10051.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10051.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3302	3302	3302	3302	3302	
5°	3289	3289	3279	3302	3302	312
15°	3135	3152	3173	3210	3216	884
25°	2857	2892	2942	3003	3022	1316
35°	2475	2539	2627	2717	2746	1549
45°	2033	2124	2255	2375	2415	1569
55°	1567	1678	1847	1985	2039	1396
65°	1071	1200	1388	1535	1591	1058
75°	557	700	874	1012	1047	589
85°	117	202	223	217	210	145
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3301.6	3301.6	3301.6	3301.6	3301.6
2.5°	3304.8	3301.6	3287.2	3306.4	3304.8
5°	3288.8	3288.8	3279.1	3301.6	3301.6
7.5°	3266.3	3267.9	3264.7	3290.4	3290.4
10°	3231.0	3237.4	3242.2	3271.1	3274.3
12.5°	3189.2	3200.5	3210.1	3245.4	3248.6
15°	3134.6	3152.3	3173.2	3210.1	3216.5
17.5°	3078.4	3099.3	3121.8	3169.9	3178.0
20°	3011.0	3035.1	3072.0	3120.2	3133.0
22.5°	2935.5	2969.2	3007.8	3065.6	3081.6
25°	2856.8	2892.1	2941.9	3002.9	3022.2
27.5°	2771.7	2813.4	2869.6	2940.3	2961.2
30°	2676.9	2725.1	2794.2	2869.6	2892.1
32.5°	2577.4	2633.6	2710.7	2794.2	2819.9
35°	2474.6	2538.8	2627.2	2717.1	2746.0
37.5°	2373.4	2437.7	2542.1	2636.8	2664.1
40°	2264.2	2334.9	2448.9	2550.1	2588.6
42.5°	2148.6	2232.1	2352.6	2465.0	2501.9
45°	2033.0	2124.5	2254.6	2375.0	2415.2
47.5°	1915.8	2016.9	2159.9	2281.9	2328.5
50°	1798.5	1906.1	2055.5	2187.2	2235.3
52.5°	1679.7	1792.1	1954.3	2094.0	2137.4
55°	1567.3	1678.1	1846.7	1984.8	2039.4
57.5°	1437.2	1562.5	1740.7	1880.4	1933.4
60°	1320.0	1442.1	1621.9	1769.6	1827.5
62.5°	1193.1	1318.4	1507.9	1655.6	1711.8
65°	1071.1	1199.6	1387.5	1535.2	1591.4
67.5°	939.4	1074.3	1267.0	1409.9	1464.5
70°	822.2	949.1	1138.5	1284.7	1339.3
72.5°	679.3	823.8	1005.3	1149.8	1209.2
75°	557.2	700.1	873.6	1011.7	1047.0
77.5°	428.8	571.7	743.5	833.4	857.5
80°	314.7	449.6	587.7	635.9	637.5
82.5°	212.0	330.8	409.5	433.6	430.4
85°	117.2	202.3	223.2	216.8	210.4
87.5°	48.2	67.4	54.6	38.5	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)