

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: P474641

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474641  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-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: 8067.9 lumens  
Efficiency: N/A  
Efficacy: 135.1 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

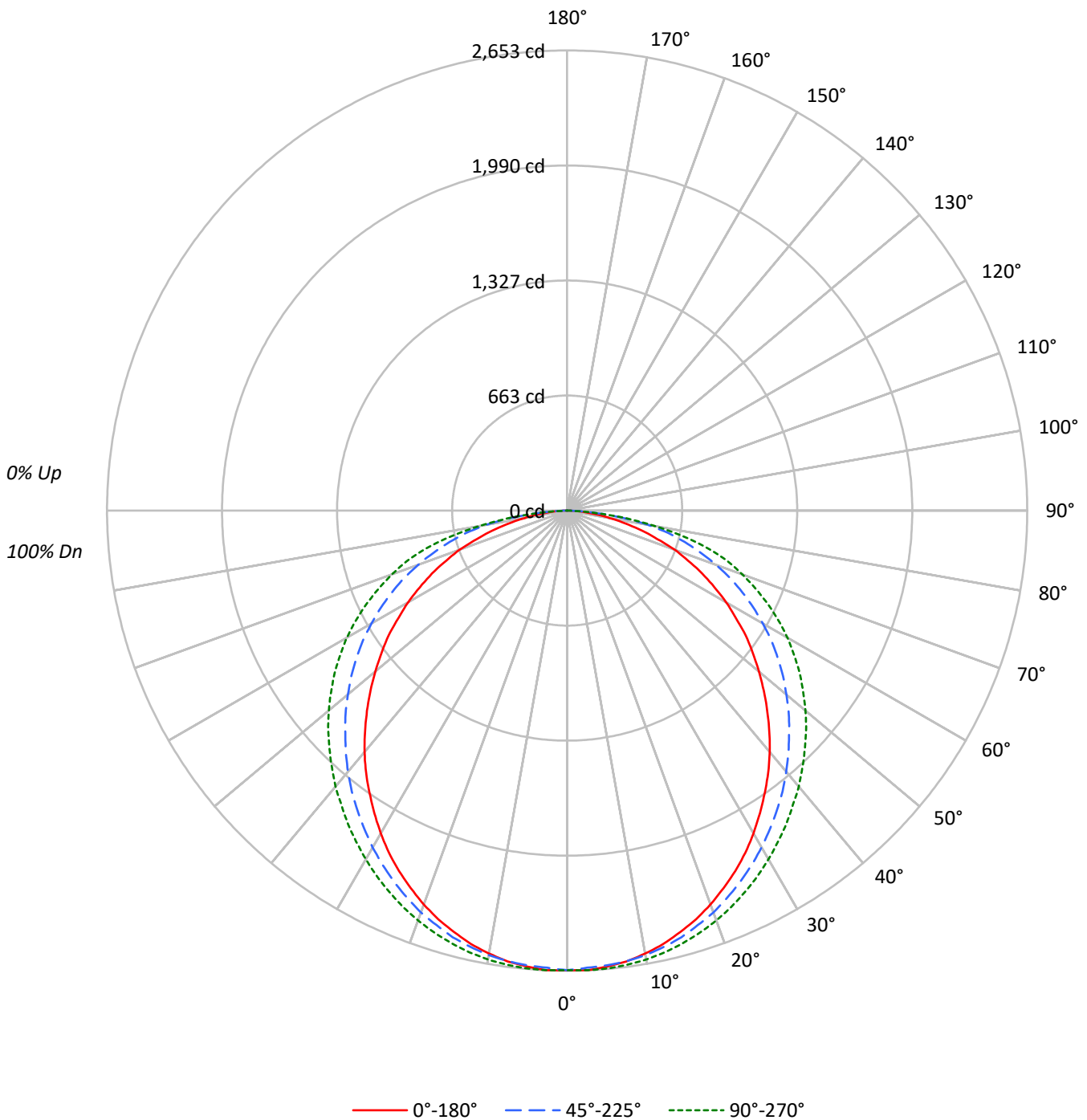
Input Watts (W): 59.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7131	7131	7131
5°	7131	7110	7158
10°	7086	7111	7181
15°	7009	7095	7192
20°	6921	7061	7201
25°	6808	7011	7203
30°	6676	6969	7213
35°	6525	6927	7241
40°	6384	6905	7299
45°	6210	6887	7377
50°	6044	6907	7511
55°	5902	6954	7680
60°	5702	7006	7894
65°	5474	7091	8133
70°	5192	7190	8458
75°	4651	7290	8738
80°	3914	7310	7930
85°	2905	5533	5212



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	251.1	3.1
10°-20°	719.7	8.9
20°-30°	1089.5	13.5
30°-40°	1318.0	16.3
40°-50°	1391.2	17.2
50°-60°	1312.0	16.3
60°-70°	1081.6	13.4
70°-80°	709.6	8.8
80°-90°	195.1	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°	2060.4	25.5
0°-40°	3378.4	41.9
0°-60°	6081.6	75.4
0°-90°	8067.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8067.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2650	2650	2650	2650	2650	
5°	2640	2640	2632	2650	2650	251
15°	2516	2530	2547	2577	2582	710
25°	2293	2321	2361	2410	2426	1056
35°	1986	2038	2109	2181	2204	1243
45°	1632	1705	1810	1906	1938	1259
55°	1258	1347	1482	1593	1637	1121
65°	860	963	1114	1232	1277	849
75°	447	562	701	812	840	473
85°	94	162	179	174	169	117
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2650.0	2650.0	2650.0	2650.0	2650.0
2.5°	2652.6	2650.0	2638.4	2653.9	2652.6
5°	2639.7	2639.7	2632.0	2650.0	2650.0
7.5°	2621.7	2623.0	2620.4	2641.0	2641.0
10°	2593.3	2598.5	2602.3	2625.5	2628.1
12.5°	2559.8	2568.8	2576.6	2604.9	2607.5
15°	2516.0	2530.2	2546.9	2576.6	2581.7
17.5°	2470.9	2487.6	2505.7	2544.3	2550.8
20°	2416.7	2436.1	2465.7	2504.4	2514.7
22.5°	2356.2	2383.2	2414.2	2460.6	2473.5
25°	2293.0	2321.4	2361.3	2410.3	2425.8
27.5°	2224.7	2258.2	2303.3	2360.0	2376.8
30°	2148.6	2187.3	2242.7	2303.3	2321.4
32.5°	2068.7	2113.8	2175.7	2242.7	2263.4
35°	1986.2	2037.8	2108.7	2180.9	2204.1
37.5°	1905.0	1956.6	2040.4	2116.4	2138.3
40°	1817.4	1874.1	1965.6	2046.8	2077.8
42.5°	1724.6	1791.6	1888.3	1978.5	2008.1
45°	1631.8	1705.3	1809.7	1906.3	1938.5
47.5°	1537.7	1618.9	1733.6	1831.6	1868.9
50°	1443.6	1530.0	1649.8	1755.5	1794.2
52.5°	1348.2	1438.4	1568.6	1680.8	1715.6
55°	1258.0	1346.9	1482.3	1593.1	1636.9
57.5°	1153.6	1254.1	1397.2	1509.3	1551.9
60°	1059.5	1157.5	1301.8	1420.4	1466.8
62.5°	957.7	1058.2	1210.3	1328.9	1374.0
65°	859.7	962.8	1113.6	1232.2	1277.3
67.5°	754.0	862.3	1017.0	1131.7	1175.5
70°	659.9	761.8	913.8	1031.1	1075.0
72.5°	545.2	661.2	806.9	922.9	970.6
75°	447.3	562.0	701.2	812.0	840.4
77.5°	344.1	458.9	596.8	669.0	688.3
80°	252.6	360.9	471.7	510.4	511.7
82.5°	170.1	265.5	328.7	348.0	345.4
85°	94.1	162.4	179.2	174.0	168.8
87.5°	38.7	54.1	43.8	30.9	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)