

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: P474592

Luminaire Tested: **24CZ2-90VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474592
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8323.6 lumens
Efficiency: N/A
Efficacy: 129.9 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

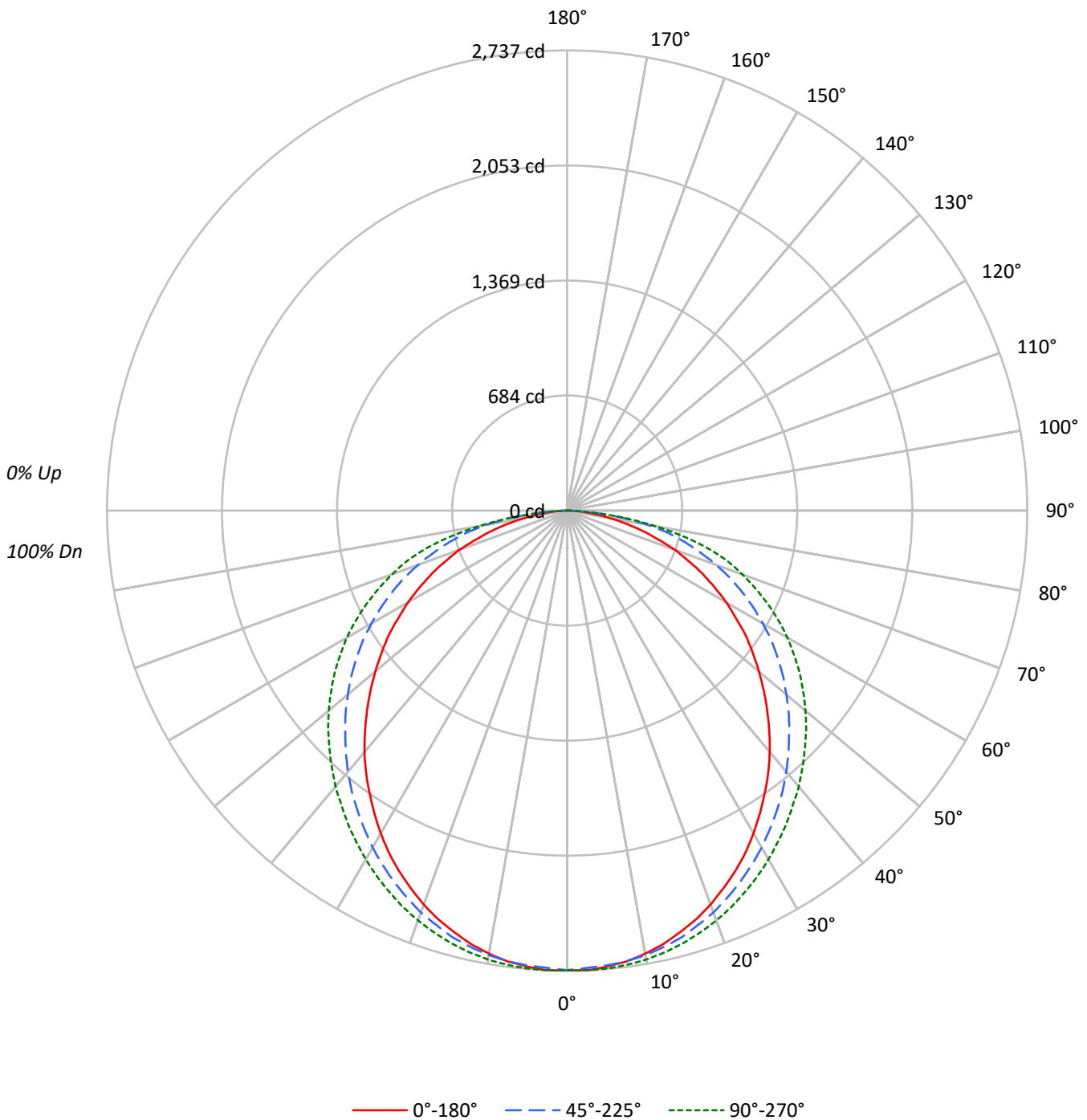
Input Watts (W): 64.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7357	7357	7357
5°	7357	7335	7386
10°	7311	7336	7409
15°	7232	7321	7421
20°	7140	7285	7430
25°	7024	7233	7431
30°	6888	7190	7442
35°	6732	7147	7470
40°	6587	7124	7530
45°	6407	7105	7611
50°	6235	7126	7749
55°	6089	7175	7923
60°	5883	7229	8145
65°	5648	7316	8391
70°	5357	7418	8725
75°	4797	7521	9014
80°	4038	7542	8181
85°	2998	5706	5379



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.1	3.1
10°-20°	742.5	8.9
20°-30°	1124.1	13.5
30°-40°	1359.8	16.3
40°-50°	1435.3	17.2
50°-60°	1353.6	16.3
60°-70°	1115.9	13.4
70°-80°	732.1	8.8
80°-90°	201.3	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°	2125.7	25.5
0°-40°	3485.5	41.9
0°-60°	6274.4	75.4
0°-90°	8323.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8323.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2734	2734	2734	2734	2734	
5°	2723	2723	2715	2734	2734	258
15°	2596	2610	2628	2658	2664	732
25°	2366	2395	2436	2487	2503	1089
35°	2049	2102	2176	2250	2274	1283
45°	1684	1759	1867	1967	2000	1299
55°	1298	1390	1529	1644	1689	1156
65°	887	993	1149	1271	1318	876
75°	461	580	723	838	867	488
85°	97	168	185	180	174	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2734.1	2734.1	2734.1	2734.1	2734.1
2.5°	2736.7	2734.1	2722.1	2738.0	2736.7
5°	2723.4	2723.4	2715.4	2734.1	2734.1
7.5°	2704.8	2706.1	2703.5	2724.7	2724.7
10°	2675.5	2680.9	2684.9	2708.8	2711.4
12.5°	2641.0	2650.3	2658.3	2687.5	2690.2
15°	2595.8	2610.4	2627.7	2658.3	2663.6
17.5°	2549.2	2566.5	2585.1	2625.0	2631.7
20°	2493.4	2513.3	2543.9	2583.8	2594.4
22.5°	2430.9	2458.8	2490.7	2538.6	2551.9
25°	2365.7	2395.0	2436.2	2486.7	2502.7
27.5°	2295.2	2329.8	2376.3	2434.9	2452.1
30°	2216.8	2256.7	2313.8	2376.3	2395.0
32.5°	2134.3	2180.9	2244.7	2313.8	2335.1
35°	2049.2	2102.4	2175.5	2250.0	2273.9
37.5°	1965.4	2018.6	2105.1	2183.5	2206.1
40°	1875.0	1933.5	2027.9	2111.7	2143.6
42.5°	1779.3	1848.4	1948.1	2041.2	2071.8
45°	1683.5	1759.3	1867.0	1966.8	2000.0
47.5°	1586.4	1670.2	1788.6	1889.6	1928.2
50°	1489.4	1578.5	1702.1	1811.2	1851.1
52.5°	1391.0	1484.0	1618.4	1734.0	1770.0
55°	1297.9	1389.6	1529.3	1643.6	1688.8
57.5°	1190.2	1293.9	1441.5	1557.2	1601.1
60°	1093.1	1194.2	1343.1	1465.4	1513.3
62.5°	988.0	1091.8	1248.7	1371.0	1417.6
65°	887.0	993.4	1148.9	1271.3	1317.8
67.5°	777.9	889.6	1049.2	1167.6	1212.8
70°	680.9	785.9	942.8	1063.8	1109.0
72.5°	562.5	682.2	832.5	952.1	1001.3
75°	461.4	579.8	723.4	837.8	867.0
77.5°	355.1	473.4	615.7	690.2	710.1
80°	260.6	372.3	486.7	526.6	527.9
82.5°	175.5	273.9	339.1	359.0	356.4
85°	97.1	167.6	184.8	179.5	174.2
87.5°	39.9	55.9	45.2	31.9	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)