

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: P474591

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474591
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-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: 7785.5 lumens
Efficiency: N/A
Efficacy: 130.4 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

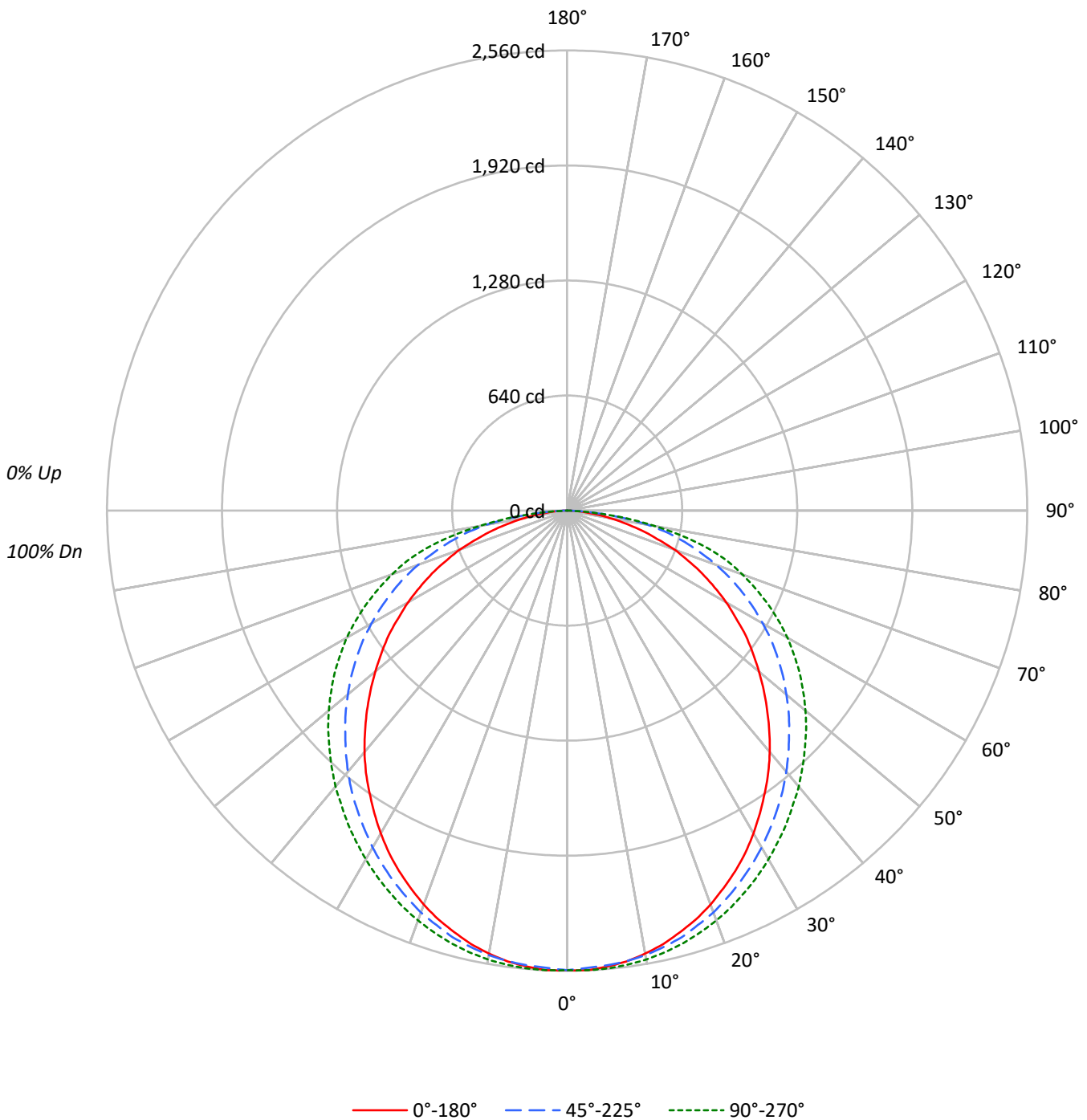
Input Watts (W): 59.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6882	6882	6882
5°	6881	6861	6908
10°	6838	6862	6930
15°	6764	6847	6941
20°	6679	6814	6949
25°	6570	6766	6951
30°	6443	6725	6961
35°	6297	6685	6987
40°	6161	6663	7043
45°	5993	6646	7119
50°	5832	6665	7248
55°	5696	6711	7411
60°	5503	6761	7618
65°	5282	6843	7848
70°	5010	6939	8161
75°	4487	7035	8432
80°	3778	7054	7652
85°	2803	5338	5030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.4	3.1
10°-20°	694.5	8.9
20°-30°	1051.4	13.5
30°-40°	1271.9	16.3
40°-50°	1342.6	17.2
50°-60°	1266.0	16.3
60°-70°	1043.8	13.4
70°-80°	684.7	8.8
80°-90°	188.3	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°	1988.3	25.5
0°-40°	3260.1	41.9
0°-60°	5868.7	75.4
0°-90°	7785.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7785.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2557	2557	2557	2557	2557	
5°	2547	2547	2540	2557	2557	242
15°	2428	2442	2458	2486	2491	685
25°	2213	2240	2279	2326	2341	1019
35°	1917	1966	2035	2104	2127	1200
45°	1575	1646	1746	1840	1871	1215
55°	1214	1300	1430	1537	1580	1081
65°	830	929	1075	1189	1233	819
75°	432	542	677	784	811	456
85°	91	157	173	168	163	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2559.8	2557.3	2546.1	2561.0	2559.8
5°	2547.3	2547.3	2539.9	2557.3	2557.3
7.5°	2529.9	2531.2	2528.7	2548.6	2548.6
10°	2502.6	2507.5	2511.3	2533.7	2536.1
12.5°	2470.2	2478.9	2486.4	2513.8	2516.2
15°	2427.9	2441.6	2457.8	2486.4	2491.4
17.5°	2384.4	2400.6	2418.0	2455.3	2461.5
20°	2332.2	2350.8	2379.4	2416.7	2426.7
22.5°	2273.7	2299.8	2329.7	2374.4	2386.9
25°	2212.7	2240.1	2278.7	2325.9	2340.9
27.5°	2146.8	2179.2	2222.7	2277.4	2293.6
30°	2073.4	2110.8	2164.2	2222.7	2240.1
32.5°	1996.3	2039.9	2099.6	2164.2	2184.1
35°	1916.7	1966.5	2034.9	2104.5	2126.9
37.5°	1838.4	1888.1	1969.0	2042.3	2063.5
40°	1753.8	1808.5	1896.8	1975.2	2005.0
42.5°	1664.2	1728.9	1822.2	1909.3	1937.9
45°	1574.7	1645.6	1746.3	1839.6	1870.7
47.5°	1483.9	1562.2	1672.9	1767.5	1803.5
50°	1393.1	1476.4	1592.1	1694.1	1731.4
52.5°	1301.0	1388.1	1513.7	1621.9	1655.5
55°	1214.0	1299.8	1430.4	1537.4	1579.6
57.5°	1113.2	1210.2	1348.3	1456.5	1497.6
60°	1022.4	1116.9	1256.3	1370.7	1415.5
62.5°	924.2	1021.2	1167.9	1282.4	1325.9
65°	829.6	929.1	1074.7	1189.1	1232.6
67.5°	727.6	832.1	981.4	1092.1	1134.4
70°	636.8	735.1	881.9	995.1	1037.3
72.5°	526.1	638.1	778.6	890.6	936.6
75°	431.6	542.3	676.6	783.6	811.0
77.5°	332.1	442.8	575.9	645.5	664.2
80°	243.8	348.3	455.2	492.6	493.8
82.5°	164.2	256.2	317.2	335.8	333.3
85°	90.8	156.7	172.9	167.9	162.9
87.5°	37.3	52.2	42.3	29.9	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)