

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: P474668

Luminaire Tested: **24CZ2-65-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474668
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

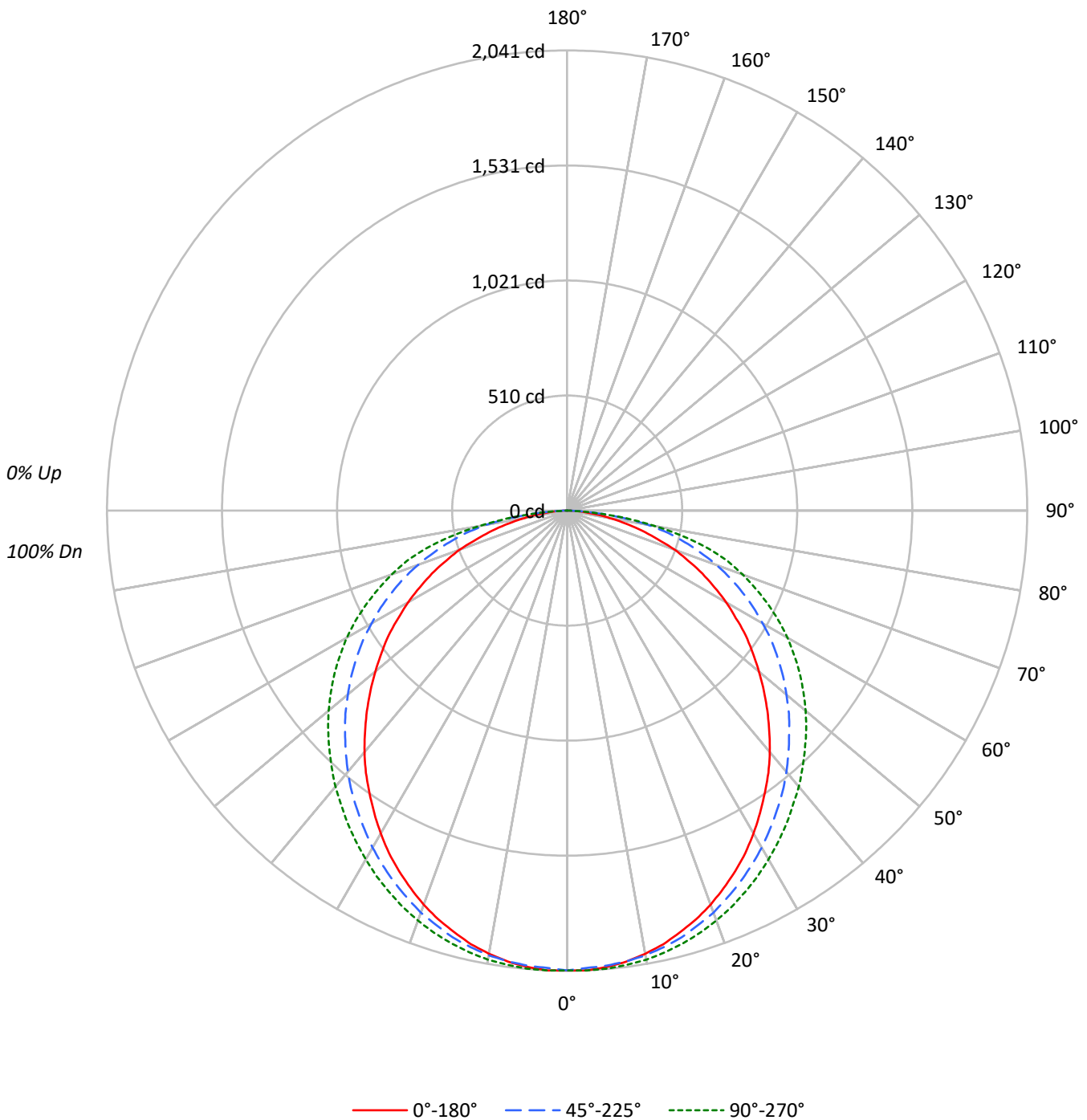
Lumens per Lamp: N/A
Luminaire Lumens: 6208.5 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 51
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



TEST NUMBER: P474668
CATALOG NUMBER: 24CZ2-65-SQR-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474668

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L840-CD1-U

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°	5488	5488	5488
5°	5487	5471	5509
10°	5453	5472	5526
15°	5394	5460	5535
20°	5326	5434	5542
25°	5239	5395	5543
30°	5138	5363	5551
35°	5021	5331	5572
40°	4913	5313	5617
45°	4779	5300	5677
50°	4651	5315	5780
55°	4542	5351	5910
60°	4388	5392	6075
65°	4213	5457	6259
70°	3995	5533	6508
75°	3579	5610	6724
80°	3013	5625	6103
85°	2235	4258	4011



TEST NUMBER: P474668

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.3	3.1
10°-20°	553.8	8.9
20°-30°	838.4	13.5
30°-40°	1014.2	16.3
40°-50°	1070.6	17.2
50°-60°	1009.6	16.3
60°-70°	832.3	13.4
70°-80°	546.0	8.8
80°-90°	150.1	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°	1585.5	25.5
0°-40°	2599.8	41.9
0°-60°	4680.0	75.4
0°-90°	6208.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6208.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2039	2039	2039	2039	2039	
5°	2031	2031	2025	2039	2039	193
15°	1936	1947	1960	1983	1987	546
25°	1764	1786	1817	1855	1867	813
35°	1528	1568	1623	1678	1696	957
45°	1256	1312	1393	1467	1492	969
55°	968	1036	1141	1226	1260	862
65°	662	741	857	948	983	653
75°	344	432	540	625	647	364
85°	72	125	138	134	130	90
90°	0	0	0	0	0	



TEST NUMBER: P474668

CATALOG NUMBER: 24CZ2-65-SQR-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2039.3	2039.3	2039.3	2039.3	2039.3
2.5°	2041.3	2039.3	2030.4	2042.3	2041.3
5°	2031.3	2031.3	2025.4	2039.3	2039.3
7.5°	2017.5	2018.5	2016.5	2032.3	2032.3
10°	1995.6	1999.6	2002.6	2020.4	2022.4
12.5°	1969.9	1976.8	1982.7	2004.6	2006.5
15°	1936.1	1947.0	1959.9	1982.7	1986.7
17.5°	1901.4	1914.3	1928.2	1957.9	1962.9
20°	1859.8	1874.6	1897.4	1927.2	1935.1
22.5°	1813.1	1834.0	1857.8	1893.5	1903.4
25°	1764.5	1786.4	1817.1	1854.8	1866.7
27.5°	1712.0	1737.8	1772.5	1816.1	1829.0
30°	1653.4	1683.2	1725.9	1772.5	1786.4
32.5°	1591.9	1626.7	1674.3	1725.9	1741.7
35°	1528.5	1568.1	1622.7	1678.2	1696.1
37.5°	1466.0	1505.7	1570.1	1628.6	1645.5
40°	1398.5	1442.2	1512.6	1575.1	1598.9
42.5°	1327.1	1378.7	1453.1	1522.5	1545.3
45°	1255.7	1312.2	1392.6	1467.0	1491.8
47.5°	1183.3	1245.8	1334.1	1409.4	1438.2
50°	1110.9	1177.3	1269.6	1350.9	1380.7
52.5°	1037.5	1106.9	1207.1	1293.4	1320.2
55°	968.1	1036.5	1140.6	1225.9	1259.7
57.5°	887.7	965.1	1075.2	1161.5	1194.2
60°	815.3	890.7	1001.8	1093.0	1128.7
62.5°	737.0	814.3	931.4	1022.6	1057.3
65°	661.6	740.9	857.0	948.2	982.9
67.5°	580.2	663.6	782.6	870.9	904.6
70°	507.8	586.2	703.2	793.5	827.2
72.5°	419.6	508.8	620.9	710.2	746.9
75°	344.2	432.5	539.6	624.9	646.7
77.5°	264.8	353.1	459.2	514.8	529.7
80°	194.4	277.7	363.0	392.8	393.8
82.5°	130.9	204.3	252.9	267.8	265.8
85°	72.4	125.0	137.9	133.9	129.9
87.5°	29.8	41.7	33.7	23.8	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)