

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: P474617

Luminaire Tested: **24CZ2-60-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474617
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60-SQR-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

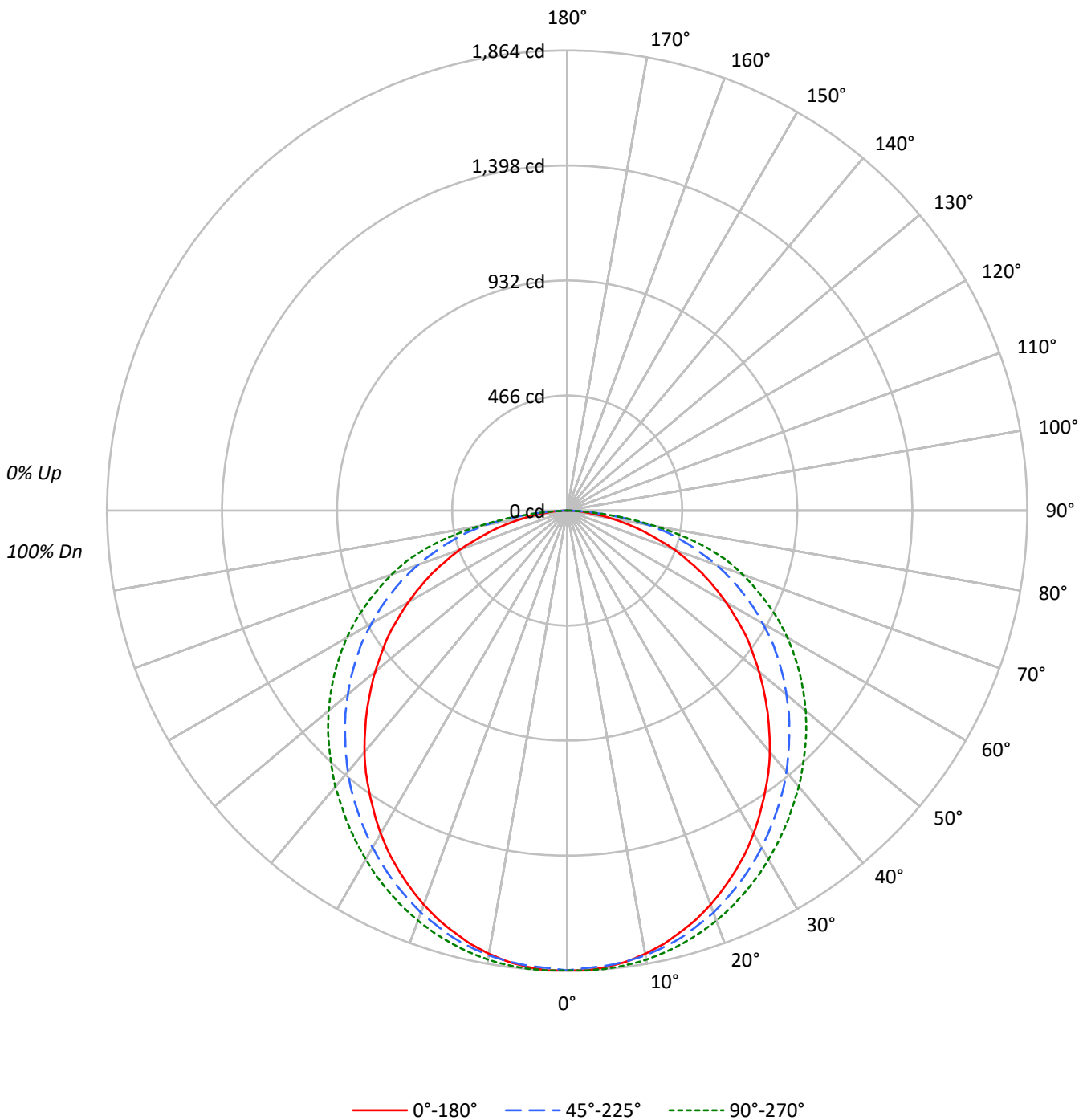
Lumens per Lamp: N/A
Luminaire Lumens: 5670.9 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.3
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°	5012	5012	5012
5°	5012	4997	5032
10°	4981	4998	5048
15°	4927	4987	5056
20°	4865	4963	5062
25°	4785	4928	5063
30°	4693	4898	5070
35°	4586	4869	5089
40°	4487	4853	5130
45°	4365	4841	5186
50°	4248	4855	5279
55°	4148	4888	5398
60°	4008	4924	5549
65°	3848	4984	5717
70°	3650	5054	5945
75°	3269	5125	6142
80°	2752	5139	5574
85°	2041	3887	3665



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.5	3.1
10°-20°	505.9	8.9
20°-30°	765.8	13.5
30°-40°	926.4	16.3
40°-50°	977.9	17.2
50°-60°	922.2	16.3
60°-70°	760.3	13.4
70°-80°	498.8	8.8
80°-90°	137.1	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°	1448.2	25.5
0°-40°	2374.7	41.9
0°-60°	4274.7	75.4
0°-90°	5670.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5670.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1863	1863	1863	1863	1863	
5°	1856	1856	1850	1863	1863	176
15°	1768	1778	1790	1811	1815	499
25°	1612	1632	1660	1694	1705	742
35°	1396	1432	1482	1533	1549	874
45°	1147	1199	1272	1340	1363	885
55°	884	947	1042	1120	1151	788
65°	604	677	783	866	898	597
75°	314	395	493	571	591	332
85°	66	114	126	122	119	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1862.7	1862.7	1862.7	1862.7	1862.7
2.5°	1864.5	1862.7	1854.5	1865.4	1864.5
5°	1855.5	1855.5	1850.0	1862.7	1862.7
7.5°	1842.8	1843.7	1841.9	1856.4	1856.4
10°	1822.8	1826.5	1829.2	1845.5	1847.3
12.5°	1799.3	1805.6	1811.1	1831.0	1832.8
15°	1768.5	1778.4	1790.2	1811.1	1814.7
17.5°	1736.8	1748.5	1761.2	1788.4	1792.9
20°	1698.7	1712.3	1733.1	1760.3	1767.6
22.5°	1656.1	1675.2	1696.9	1729.5	1738.6
25°	1611.7	1631.7	1659.8	1694.2	1705.1
27.5°	1563.7	1587.3	1619.0	1658.9	1670.6
30°	1510.3	1537.5	1576.4	1619.0	1631.7
32.5°	1454.1	1485.8	1529.3	1576.4	1590.9
35°	1396.1	1432.4	1482.2	1532.9	1549.2
37.5°	1339.0	1375.3	1434.2	1487.6	1503.0
40°	1277.4	1317.3	1381.6	1438.7	1460.4
42.5°	1212.2	1259.3	1327.3	1390.7	1411.5
45°	1147.0	1198.6	1272.0	1339.9	1362.6
47.5°	1080.8	1137.9	1218.5	1287.4	1313.7
50°	1014.7	1075.4	1159.7	1233.9	1261.1
52.5°	947.7	1011.1	1102.6	1181.4	1205.9
55°	884.2	946.8	1041.9	1119.8	1150.6
57.5°	810.9	881.5	982.1	1060.9	1090.8
60°	744.7	813.6	915.0	998.4	1031.0
62.5°	673.1	743.8	850.7	934.1	965.8
65°	604.3	676.8	782.8	866.1	897.8
67.5°	530.0	606.1	714.8	795.5	826.3
70°	463.9	535.4	642.3	724.8	755.6
72.5°	383.2	464.8	567.1	648.7	682.2
75°	314.4	395.0	492.9	570.8	590.7
77.5°	241.9	322.5	419.5	470.2	483.8
80°	177.6	253.7	331.6	358.8	359.7
82.5°	119.6	186.6	231.0	244.6	242.8
85°	66.1	114.2	125.9	122.3	118.7
87.5°	27.2	38.1	30.8	21.7	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)