

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: P474568

Luminaire Tested: **24CZ2-65-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474568
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-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

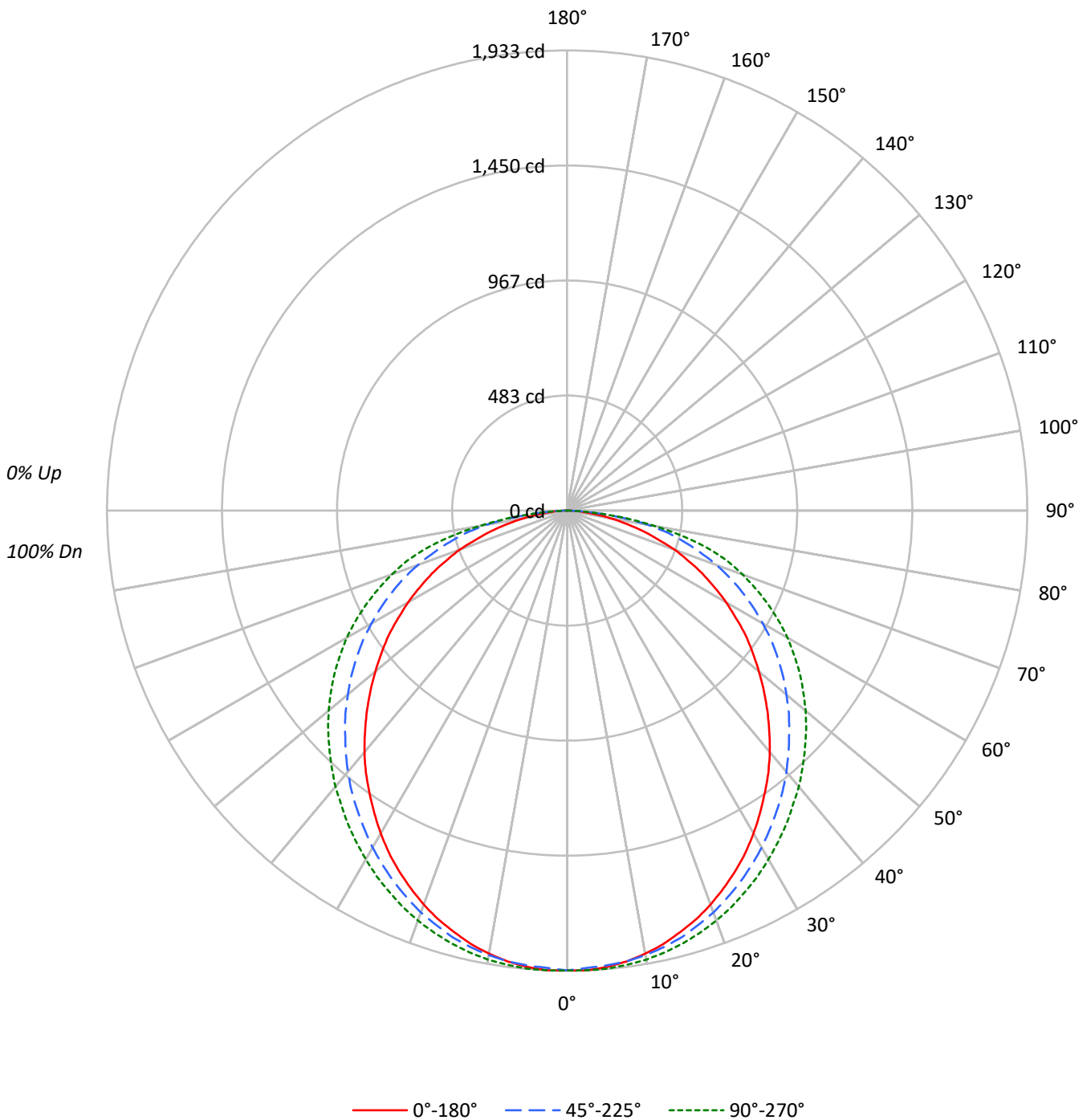
Lumens per Lamp: N/A
Luminaire Lumens: 5879.5 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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



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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°	5197	5197	5197
5°	5196	5181	5217
10°	5164	5182	5233
15°	5108	5171	5241
20°	5044	5146	5248
25°	4961	5109	5249
30°	4865	5079	5257
35°	4755	5048	5276
40°	4652	5032	5319
45°	4526	5019	5376
50°	4404	5033	5474
55°	4301	5068	5597
60°	4155	5106	5753
65°	3989	5168	5927
70°	3784	5240	6164
75°	3388	5313	6367
80°	2853	5328	5779
85°	2118	4032	3798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	3.1
10°-20°	524.5	8.9
20°-30°	794.0	13.5
30°-40°	960.5	16.3
40°-50°	1013.9	17.2
50°-60°	956.1	16.3
60°-70°	788.2	13.4
70°-80°	517.1	8.8
80°-90°	142.2	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°	1501.5	25.5
0°-40°	2462.0	41.9
0°-60°	4432.0	75.4
0°-90°	5879.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5879.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1931	1931	1931	1931	1931	
5°	1924	1924	1918	1931	1931	183
15°	1834	1844	1856	1878	1881	517
25°	1671	1692	1721	1756	1768	770
35°	1448	1485	1537	1589	1606	906
45°	1189	1243	1319	1389	1413	918
55°	917	982	1080	1161	1193	817
65°	626	702	812	898	931	619
75°	326	410	511	592	612	344
85°	69	118	131	127	123	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1931.2	1931.2	1931.2	1931.2	1931.2
2.5°	1933.1	1931.2	1922.8	1934.0	1933.1
5°	1923.7	1923.7	1918.1	1931.2	1931.2
7.5°	1910.5	1911.5	1909.6	1924.6	1924.6
10°	1889.9	1893.6	1896.5	1913.4	1915.2
12.5°	1865.5	1872.0	1877.7	1898.3	1900.2
15°	1833.5	1843.9	1856.1	1877.7	1881.4
17.5°	1800.7	1812.9	1826.0	1854.2	1858.9
20°	1761.2	1775.3	1796.9	1825.1	1832.6
22.5°	1717.1	1736.8	1759.3	1793.1	1802.5
25°	1671.0	1691.7	1720.8	1756.5	1767.8
27.5°	1621.2	1645.7	1678.5	1719.9	1732.1
30°	1565.8	1594.0	1634.4	1678.5	1691.7
32.5°	1507.6	1540.5	1585.5	1634.4	1649.4
35°	1447.5	1485.0	1536.7	1589.3	1606.2
37.5°	1388.3	1425.9	1486.9	1542.3	1558.3
40°	1324.4	1365.8	1432.4	1491.6	1514.2
42.5°	1256.8	1305.6	1376.1	1441.8	1463.4
45°	1189.2	1242.7	1318.8	1389.2	1412.7
47.5°	1120.6	1179.8	1263.4	1334.8	1362.0
50°	1052.0	1115.0	1202.3	1279.3	1307.5
52.5°	982.5	1048.3	1143.1	1224.9	1250.2
55°	916.8	981.6	1080.2	1161.0	1192.9
57.5°	840.7	913.9	1018.2	1099.9	1130.9
60°	772.1	843.5	948.7	1035.1	1068.9
62.5°	697.9	771.2	882.0	968.4	1001.3
65°	626.5	701.7	811.6	898.0	930.9
67.5°	549.5	628.4	741.1	824.7	856.6
70°	480.9	555.1	666.0	751.4	783.4
72.5°	397.3	481.9	588.0	672.5	707.3
75°	325.9	409.5	511.0	591.8	612.4
77.5°	250.8	334.4	434.9	487.5	501.6
80°	184.1	263.0	343.8	372.0	372.9
82.5°	124.0	193.5	239.5	253.6	251.7
85°	68.6	118.4	130.6	126.8	123.0
87.5°	28.2	39.5	31.9	22.5	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)