

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: P474686

Luminaire Tested: **24CZ2-55VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474686  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-55VHE-SQR-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5328.5 lumens  
Efficiency: N/A  
Efficacy: 143.6 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

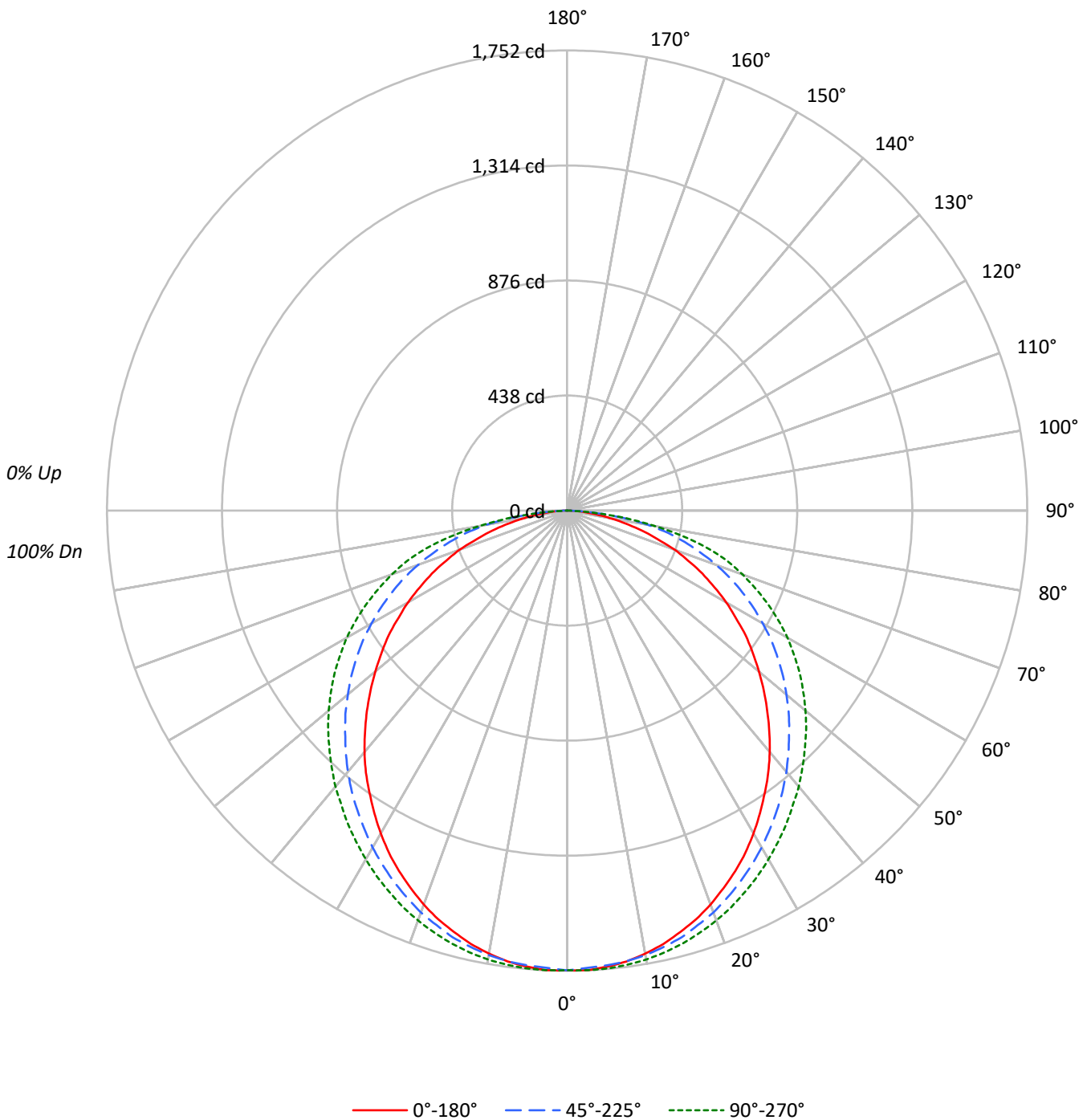
Input Watts (W): 37.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4710	4710	4710
5°	4709	4696	4728
10°	4680	4696	4743
15°	4629	4686	4750
20°	4571	4664	4756
25°	4497	4630	4757
30°	4410	4602	4764
35°	4309	4575	4782
40°	4216	4560	4821
45°	4101	4548	4872
50°	3991	4562	4961
55°	3898	4593	5072
60°	3766	4627	5214
65°	3615	4683	5372
70°	3430	4749	5586
75°	3071	4815	5770
80°	2586	4829	5238
85°	1917	3653	3443



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.9	3.1
10°-20°	475.3	8.9
20°-30°	719.6	13.5
30°-40°	870.5	16.3
40°-50°	918.9	17.2
50°-60°	866.5	16.3
60°-70°	714.4	13.4
70°-80°	468.6	8.8
80°-90°	128.9	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°	1360.8	25.5
0°-40°	2231.3	41.9
0°-60°	4016.6	75.4
0°-90°	5328.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5328.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1750	1750	1750	1750	1750	
5°	1743	1743	1738	1750	1750	165
15°	1662	1671	1682	1702	1705	469
25°	1514	1533	1560	1592	1602	697
35°	1312	1346	1393	1440	1456	821
45°	1078	1126	1195	1259	1280	832
55°	831	890	979	1052	1081	740
65°	568	636	736	814	844	561
75°	295	371	463	536	555	312
85°	62	107	118	115	112	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1750.2	1750.2	1750.2	1750.2	1750.2
2.5°	1751.9	1750.2	1742.6	1752.8	1751.9
5°	1743.4	1743.4	1738.3	1750.2	1750.2
7.5°	1731.5	1732.4	1730.6	1744.3	1744.3
10°	1712.8	1716.2	1718.7	1734.1	1735.8
12.5°	1690.6	1696.6	1701.7	1720.4	1722.1
15°	1661.7	1671.1	1682.1	1701.7	1705.1
17.5°	1631.9	1643.0	1654.9	1680.4	1684.7
20°	1596.1	1608.9	1628.5	1654.0	1660.8
22.5°	1556.1	1574.0	1594.4	1625.1	1633.6
25°	1514.4	1533.2	1559.5	1591.9	1602.1
27.5°	1469.3	1491.4	1521.2	1558.7	1569.8
30°	1419.1	1444.6	1481.2	1521.2	1533.2
32.5°	1366.3	1396.1	1437.0	1481.2	1494.8
35°	1311.8	1345.9	1392.7	1440.4	1455.7
37.5°	1258.2	1292.2	1347.6	1397.8	1412.3
40°	1200.3	1237.8	1298.2	1351.8	1372.3
42.5°	1139.0	1183.3	1247.1	1306.7	1326.3
45°	1077.7	1126.2	1195.2	1259.0	1280.3
47.5°	1015.6	1069.2	1145.0	1209.7	1234.4
50°	953.4	1010.5	1089.6	1159.4	1185.0
52.5°	890.4	950.0	1036.0	1110.1	1133.1
55°	830.8	889.6	979.0	1052.2	1081.1
57.5°	761.9	828.3	922.8	996.8	1024.9
60°	699.8	764.4	859.8	938.1	968.8
62.5°	632.5	698.9	799.3	877.7	907.5
65°	567.8	635.9	735.5	813.8	843.6
67.5°	498.0	569.5	671.7	747.4	776.4
70°	435.9	503.1	603.6	681.0	710.0
72.5°	360.1	436.7	532.9	609.5	641.0
75°	295.4	371.2	463.1	536.3	555.0
77.5°	227.3	303.1	394.1	441.8	454.6
80°	166.9	238.4	311.6	337.1	338.0
82.5°	112.4	175.4	217.1	229.8	228.1
85°	62.1	107.3	118.3	114.9	111.5
87.5°	25.5	35.8	28.9	20.4	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)