

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: P474705

Luminaire Tested: **24CZ2-155VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474705
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-155VHE-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: 15049.2 lumens
Efficiency: N/A
Efficacy: 132.0 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

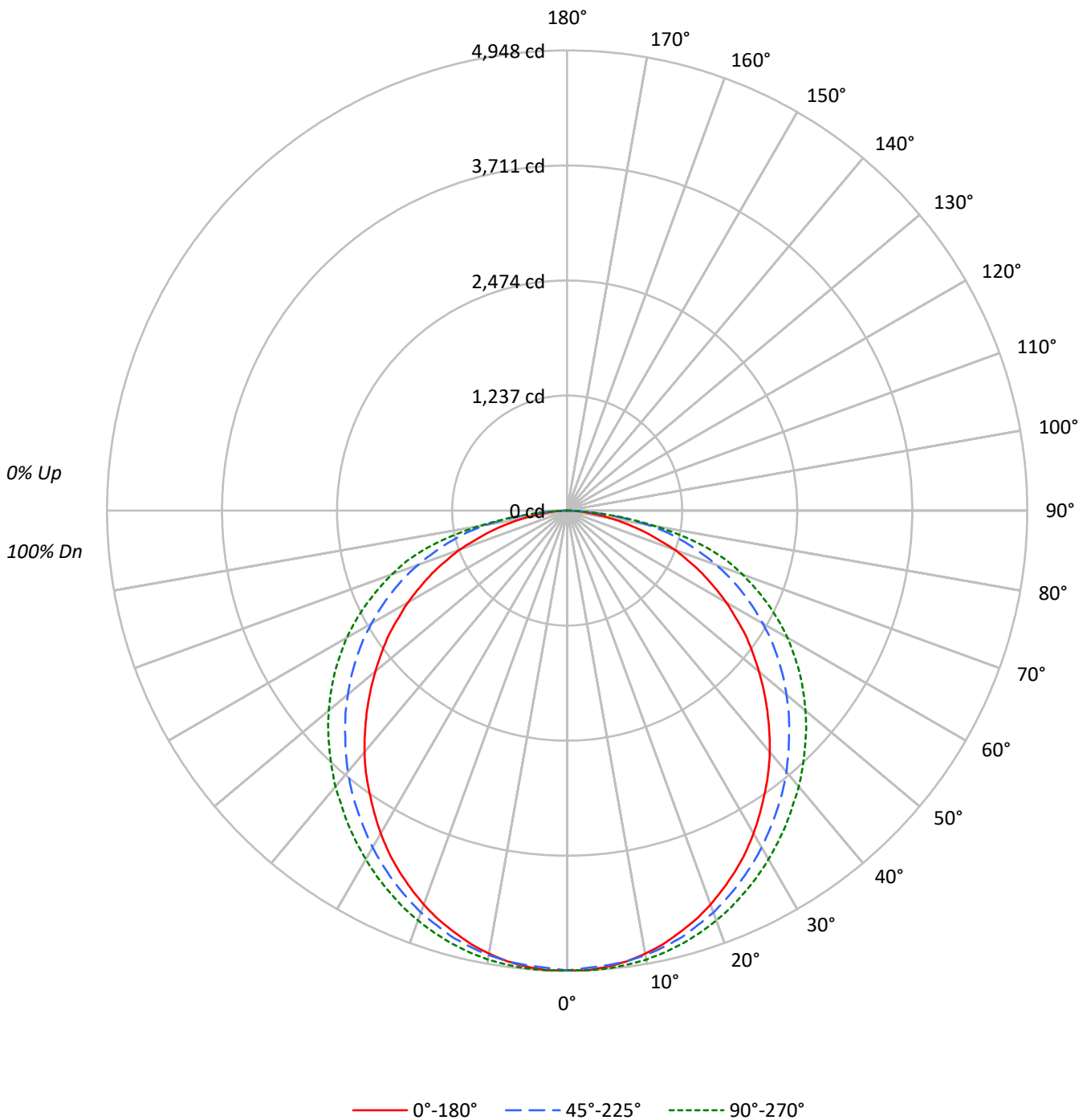
Input Watts (W): 114
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13302	13302	13302
5°	13301	13262	13353
10°	13218	13264	13395
15°	13075	13235	13416
20°	12909	13171	13433
25°	12700	13078	13435
30°	12454	12999	13455
35°	12171	12922	13506
40°	11908	12880	13615
45°	11584	12846	13761
50°	11273	12884	14011
55°	11009	12972	14325
60°	10636	13069	14726
65°	10211	13227	15171
70°	9685	13412	15777
75°	8674	13598	16299
80°	7302	13637	14792
85°	5419	10319	9726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	468.5	3.1
10°-20°	1342.5	8.9
20°-30°	2032.3	13.5
30°-40°	2458.5	16.3
40°-50°	2595.1	17.2
50°-60°	2447.2	16.3
60°-70°	2017.6	13.4
70°-80°	1323.6	8.8
80°-90°	363.9	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°	3843.3	25.5
0°-40°	6301.8	41.9
0°-60°	11344.1	75.4
0°-90°	15049.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15049.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4943	4943	4943	4943	4943	
5°	4924	4924	4910	4943	4943	467
15°	4693	4720	4751	4806	4816	1324
25°	4277	4330	4405	4496	4525	1970
35°	3705	3801	3933	4068	4111	2319
45°	3044	3181	3376	3556	3616	2349
55°	2347	2512	2765	2972	3053	2090
65°	1604	1796	2077	2298	2383	1583
75°	834	1048	1308	1515	1568	882
85°	176	303	334	325	315	218
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4943.2	4943.2	4943.2	4943.2	4943.2
2.5°	4948.0	4943.2	4921.5	4950.4	4948.0
5°	4923.9	4923.9	4909.5	4943.2	4943.2
7.5°	4890.3	4892.7	4887.9	4926.4	4926.4
10°	4837.4	4847.0	4854.2	4897.5	4902.3
12.5°	4774.9	4791.7	4806.1	4859.0	4863.8
15°	4693.1	4719.6	4750.8	4806.1	4815.8
17.5°	4609.0	4640.2	4673.9	4746.0	4758.1
20°	4508.0	4544.1	4599.4	4671.5	4690.7
22.5°	4395.0	4445.5	4503.2	4589.8	4613.8
25°	4277.2	4330.1	4404.6	4496.0	4524.8
27.5°	4149.8	4212.3	4296.4	4402.2	4433.5
30°	4007.9	4080.0	4183.4	4296.4	4330.1
32.5°	3858.9	3943.0	4058.4	4183.4	4221.9
35°	3705.0	3801.2	3933.4	4068.0	4111.3
37.5°	3553.5	3649.7	3806.0	3947.8	3988.7
40°	3390.0	3495.8	3666.5	3818.0	3875.7
42.5°	3216.9	3341.9	3522.3	3690.6	3745.9
45°	3043.8	3180.9	3375.6	3555.9	3616.0
47.5°	2868.3	3019.8	3233.7	3416.5	3486.2
50°	2692.8	2853.9	3077.5	3274.6	3346.7
52.5°	2514.9	2683.2	2926.0	3135.2	3200.1
55°	2346.6	2512.5	2764.9	2971.7	3053.4
57.5°	2151.8	2339.4	2606.2	2815.4	2894.7
60°	1976.3	2159.0	2428.3	2649.5	2736.1
62.5°	1786.4	1973.9	2257.6	2478.8	2563.0
65°	1603.6	1796.0	2077.3	2298.5	2382.6
67.5°	1406.5	1608.5	1897.0	2111.0	2192.7
70°	1231.0	1420.9	1704.6	1923.4	2005.2
72.5°	1017.0	1233.4	1505.1	1721.5	1810.4
75°	834.3	1048.3	1307.9	1514.7	1567.6
77.5°	641.9	855.9	1113.2	1247.8	1283.9
80°	471.2	673.2	880.0	952.1	954.5
82.5°	317.4	495.3	613.1	649.2	644.3
85°	175.5	302.9	334.2	324.6	315.0
87.5°	72.1	101.0	81.7	57.7	45.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)