

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: P475310

Luminaire Tested: **22CZ2-105VHE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475310
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-105VHE-SQR-UNV-L840-CD1-U
Description: 2'X2' 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: 10194.9 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

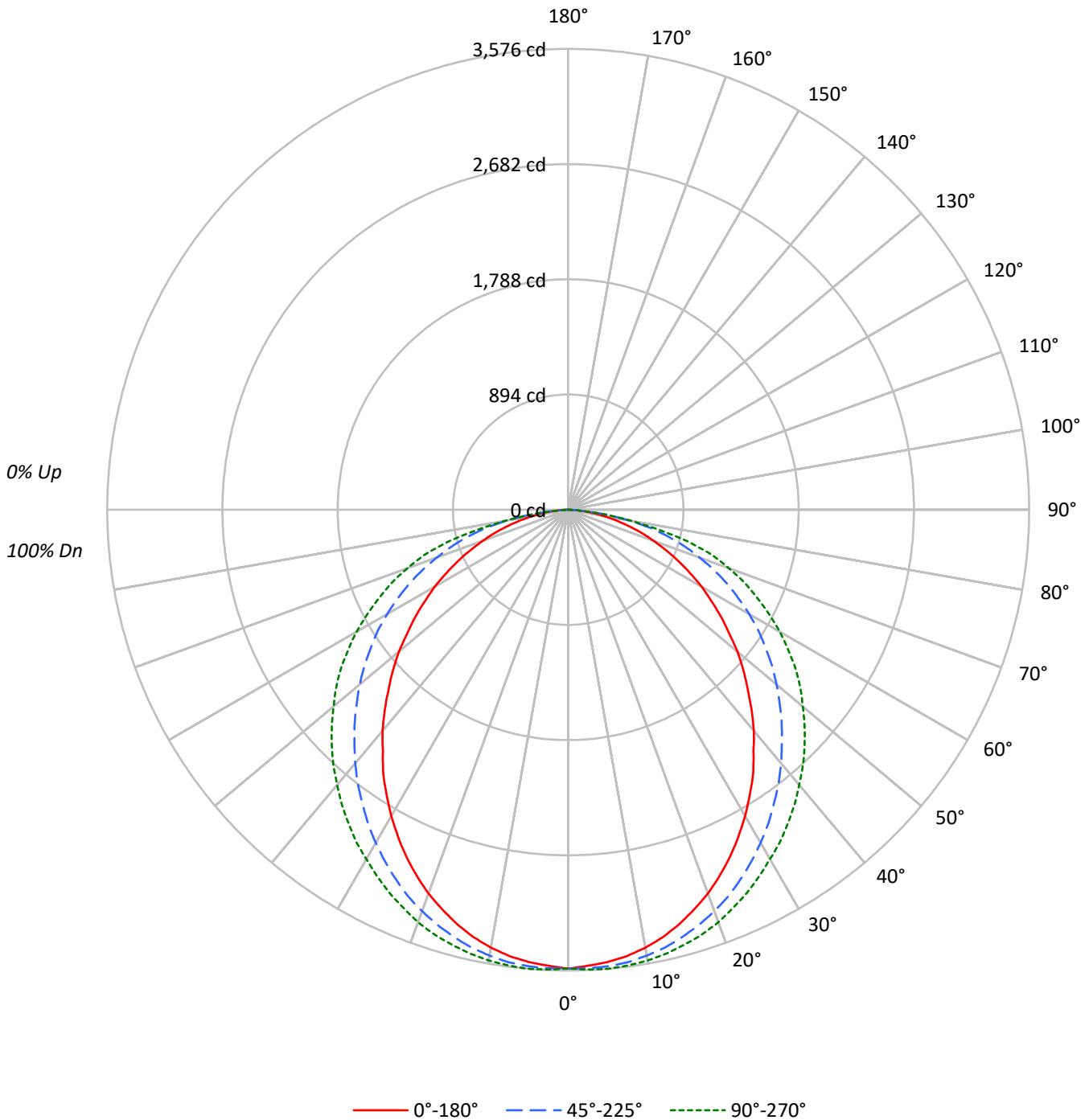
Input Watts (W): 79.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62		72	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		64	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9583	9583	9583
5°	9515	9606	9660
10°	9428	9599	9704
15°	9275	9557	9733
20°	9076	9493	9755
25°	8822	9396	9741
30°	8525	9277	9728
35°	8218	9139	9760
40°	7869	9026	9792
45°	7494	8913	9870
50°	7170	8832	9946
55°	6787	8762	10103
60°	6432	8726	10210
65°	6007	8656	10289
70°	5519	8526	10430
75°	4982	8300	10059
80°	4272	7352	7575
85°	3440	4332	3440



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.6	3.3
10°-20°	965.3	9.5
20°-30°	1449.8	14.2
30°-40°	1729.1	17.0
40°-50°	1787.8	17.5
50°-60°	1643.6	16.1
60°-70°	1308.5	12.8
70°-80°	799.4	7.8
80°-90°	173.7	1.7
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°	2752.8	27.0
0°-40°	4481.9	44.0
0°-60°	7913.3	77.6
0°-90°	10194.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10194.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3561	3561	3561	3561	3561	
5°	3523	3532	3556	3571	3576	334
15°	3329	3368	3430	3479	3494	938
25°	2971	3043	3164	3252	3281	1367
35°	2502	2608	2782	2928	2971	1561
45°	1969	2110	2342	2531	2594	1523
55°	1447	1606	1868	2081	2154	1294
65°	943	1104	1359	1548	1616	935
75°	479	620	798	939	968	510
85°	111	136	140	121	111	128
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3561.1	3561.1	3561.1	3561.1	3561.1
2.5°	3541.9	3546.7	3561.1	3571.3	3571.3
5°	3522.6	3532.2	3556.3	3571.3	3576.1
7.5°	3493.7	3508.1	3541.9	3561.1	3566.5
10°	3450.3	3469.6	3512.9	3541.9	3551.5
12.5°	3396.8	3425.7	3479.2	3517.8	3527.4
15°	3329.3	3367.8	3430.5	3479.2	3493.7
17.5°	3251.6	3299.8	3377.5	3435.8	3455.1
20°	3169.2	3217.9	3314.8	3382.3	3406.4
22.5°	3072.8	3135.5	3246.8	3324.5	3343.7
25°	2971.1	3043.4	3164.4	3251.6	3280.6
27.5°	2859.7	2947.0	3077.6	3184.2	3208.3
30°	2743.5	2835.6	2985.5	3101.7	3130.6
32.5°	2622.5	2729.1	2888.6	3019.3	3058.4
35°	2501.5	2608.1	2782.1	2927.7	2971.1
37.5°	2361.2	2487.1	2680.9	2830.8	2883.8
40°	2240.2	2361.2	2569.5	2733.9	2787.4
42.5°	2104.8	2235.4	2453.3	2632.2	2695.3
45°	1969.3	2109.6	2342.0	2531.0	2593.6
47.5°	1843.5	1983.8	2225.8	2424.4	2487.1
50°	1712.8	1857.9	2109.6	2313.0	2375.7
52.5°	1572.5	1732.1	1993.4	2196.9	2269.7
55°	1446.7	1606.3	1867.6	2080.7	2153.5
57.5°	1316.1	1480.5	1751.9	1954.8	2022.8
60°	1195.1	1354.6	1621.3	1819.4	1897.0
62.5°	1064.4	1228.8	1490.1	1683.9	1756.7
65°	943.4	1103.5	1359.4	1548.5	1615.9
67.5°	822.4	982.5	1224.0	1403.4	1480.5
70°	701.4	861.5	1083.7	1258.3	1325.7
72.5°	595.4	735.7	948.2	1108.3	1171.0
75°	479.2	619.5	798.3	938.6	967.5
77.5°	372.7	498.5	648.4	711.0	721.2
80°	275.7	372.7	474.4	488.8	488.8
82.5°	183.7	256.5	295.0	299.8	295.0
85°	111.4	135.5	140.3	121.0	111.4
87.5°	38.6	38.6	24.1	14.5	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)