

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: P474661

Luminaire Tested: **24CZ2-30-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474661
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-30-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

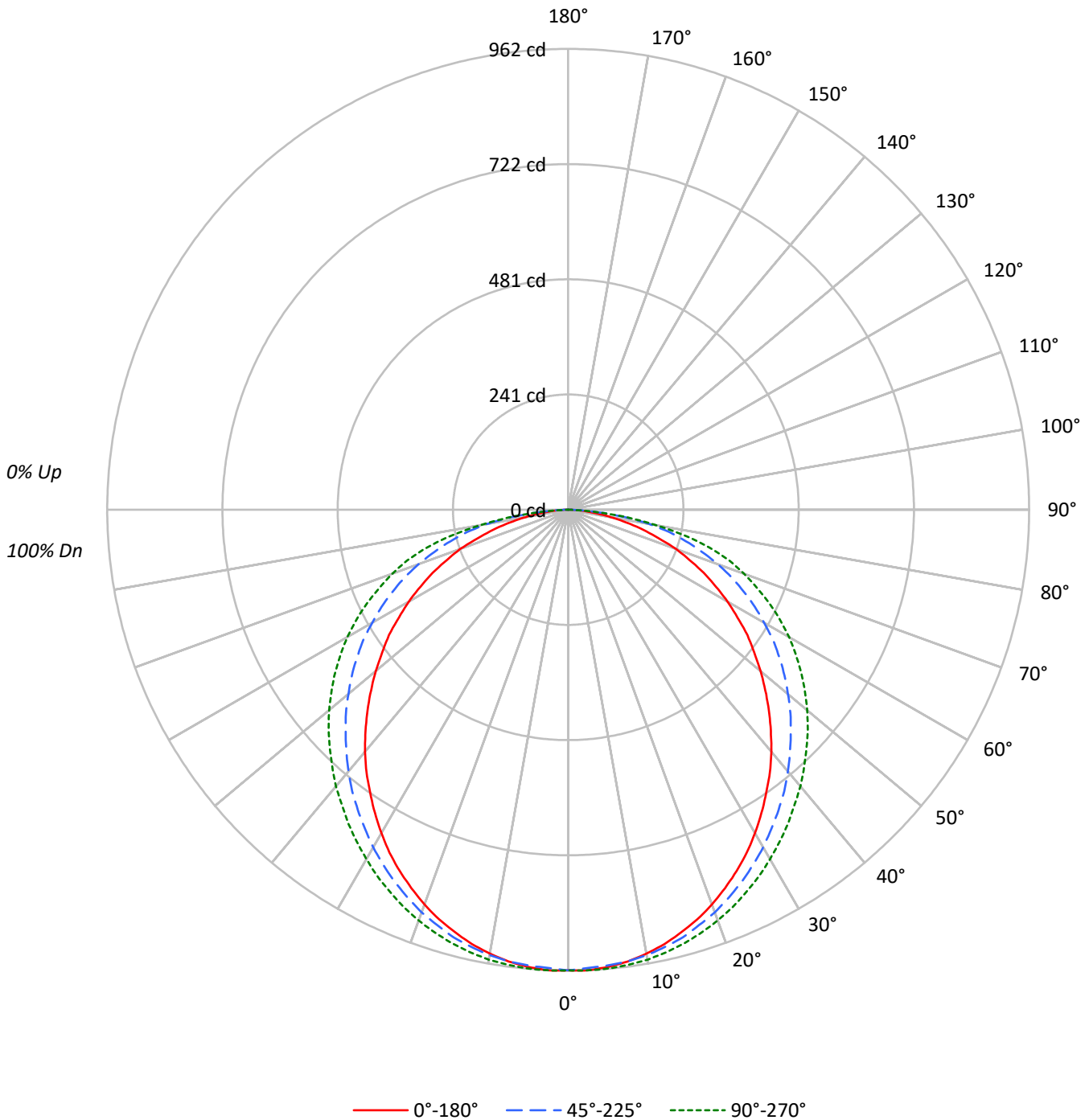
Lumens per Lamp: N/A
Luminaire Lumens: 2927.5 lumens
Efficiency: N/A
Efficacy: 124.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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°	2588	2588	2588
5°	2588	2580	2598
10°	2571	2580	2606
15°	2544	2575	2610
20°	2511	2562	2613
25°	2471	2544	2613
30°	2423	2529	2617
35°	2368	2514	2627
40°	2317	2506	2648
45°	2253	2499	2677
50°	2193	2506	2725
55°	2142	2524	2787
60°	2069	2542	2865
65°	1987	2573	2951
70°	1884	2609	3069
75°	1687	2645	3170
80°	1421	2653	2878
85°	1053	2007	1893



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	3.1
10°-20°	261.2	8.9
20°-30°	395.4	13.5
30°-40°	478.3	16.3
40°-50°	504.8	17.2
50°-60°	476.1	16.3
60°-70°	392.5	13.4
70°-80°	257.5	8.8
80°-90°	70.8	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°	747.6	25.5
0°-40°	1225.9	41.9
0°-60°	2206.8	75.4
0°-90°	2927.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2927.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	958	958	955	962	962	91
15°	913	918	924	935	937	258
25°	832	842	857	875	880	383
35°	721	739	765	791	800	451
45°	592	619	657	692	703	457
55°	456	489	538	578	594	407
65°	312	349	404	447	464	308
75°	162	204	254	295	305	172
85°	34	59	65	63	61	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	961.6	961.6	961.6	961.6	961.6
2.5°	962.5	961.6	957.4	963.0	962.5
5°	957.9	957.9	955.1	961.6	961.6
7.5°	951.3	951.8	950.8	958.3	958.3
10°	941.0	942.9	944.3	952.7	953.7
12.5°	928.9	932.1	934.9	945.2	946.2
15°	913.0	918.1	924.2	934.9	936.8
17.5°	896.6	902.7	909.2	923.3	925.6
20°	877.0	884.0	894.7	908.8	912.5
22.5°	855.0	864.8	876.0	892.9	897.5
25°	832.1	842.3	856.8	874.6	880.2
27.5°	807.3	819.4	835.8	856.4	862.5
30°	779.7	793.7	813.8	835.8	842.3
32.5°	750.7	767.0	789.5	813.8	821.3
35°	720.7	739.4	765.2	791.4	799.8
37.5°	691.3	710.0	740.4	768.0	775.9
40°	659.5	680.0	713.3	742.7	753.9
42.5°	625.8	650.1	685.2	717.9	728.7
45°	592.1	618.8	656.7	691.7	703.4
47.5°	558.0	587.4	629.1	664.6	678.2
50°	523.8	555.2	598.7	637.0	651.0
52.5°	489.2	522.0	569.2	609.9	622.5
55°	456.5	488.8	537.9	578.1	594.0
57.5°	418.6	455.1	507.0	547.7	563.1
60°	384.5	420.0	472.4	515.4	532.3
62.5°	347.5	384.0	439.2	482.2	498.6
65°	312.0	349.4	404.1	447.1	463.5
67.5°	273.6	312.9	369.0	410.6	426.5
70°	239.5	276.4	331.6	374.2	390.1
72.5°	197.8	239.9	292.8	334.9	352.2
75°	162.3	203.9	254.4	294.7	304.9
77.5°	124.9	166.5	216.5	242.7	249.8
80°	91.7	131.0	171.2	185.2	185.7
82.5°	61.7	96.3	119.3	126.3	125.3
85°	34.1	58.9	65.0	63.1	61.3
87.5°	14.0	19.6	15.9	11.2	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)