

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: P474698

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474698
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-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: 11596.0 lumens
Efficiency: N/A
Efficacy: 137.7 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

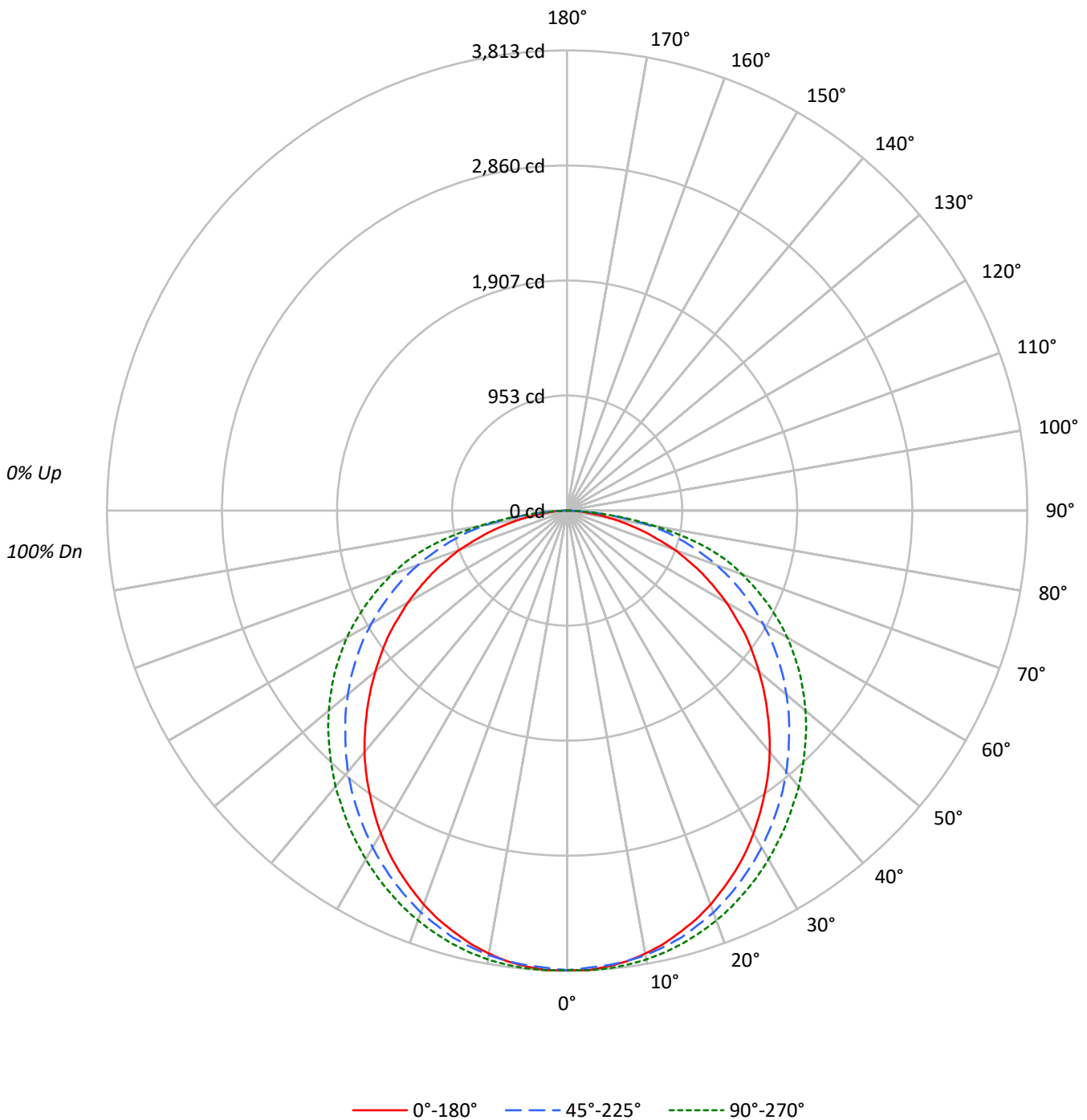
Input Watts (W): 84.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10250	10250	10250
5°	10249	10219	10289
10°	10185	10221	10322
15°	10074	10198	10338
20°	9947	10149	10350
25°	9785	10077	10352
30°	9596	10016	10367
35°	9378	9956	10407
40°	9176	9924	10491
45°	8926	9898	10604
50°	8686	9927	10796
55°	8483	9995	11038
60°	8196	10070	11346
65°	7868	10192	11690
70°	7463	10334	12157
75°	6683	10478	12559
80°	5627	10507	11398
85°	4174	7950	7493



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.0	3.1
10°-20°	1034.5	8.9
20°-30°	1566.0	13.5
30°-40°	1894.4	16.3
40°-50°	1999.6	17.2
50°-60°	1885.7	16.3
60°-70°	1554.6	13.4
70°-80°	1019.9	8.8
80°-90°	280.4	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°	2961.4	25.5
0°-40°	4855.8	41.9
0°-60°	8741.1	75.4
0°-90°	11596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3809	3809	3809	3809	3809	
5°	3794	3794	3783	3809	3809	360
15°	3616	3637	3661	3703	3711	1020
25°	3296	3336	3394	3464	3487	1518
35°	2855	2929	3031	3135	3168	1787
45°	2345	2451	2601	2740	2786	1810
55°	1808	1936	2130	2290	2353	1611
65°	1236	1384	1601	1771	1836	1220
75°	643	808	1008	1167	1208	679
85°	135	233	258	250	243	168
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3808.9	3808.9	3808.9	3808.9	3808.9
2.5°	3812.6	3808.9	3792.2	3814.5	3812.6
5°	3794.1	3794.1	3783.0	3808.9	3808.9
7.5°	3768.1	3770.0	3766.3	3795.9	3795.9
10°	3727.4	3734.8	3740.4	3773.7	3777.4
12.5°	3679.2	3692.2	3703.3	3744.1	3747.8
15°	3616.2	3636.6	3660.7	3703.3	3710.7
17.5°	3551.4	3575.5	3601.4	3657.0	3666.3
20°	3473.6	3501.4	3544.0	3599.6	3614.4
22.5°	3386.5	3425.4	3469.9	3536.6	3555.1
25°	3295.7	3336.5	3393.9	3464.3	3486.6
27.5°	3197.6	3245.7	3310.6	3392.1	3416.2
30°	3088.3	3143.8	3223.5	3310.6	3336.5
32.5°	2973.4	3038.2	3127.2	3223.5	3253.1
35°	2854.8	2928.9	3030.8	3134.6	3167.9
37.5°	2738.1	2812.2	2932.6	3041.9	3073.4
40°	2612.1	2693.7	2825.2	2941.9	2986.4
42.5°	2478.8	2575.1	2714.0	2843.7	2886.3
45°	2345.4	2451.0	2601.0	2740.0	2786.3
47.5°	2210.1	2326.8	2491.7	2632.5	2686.2
50°	2074.9	2199.0	2371.3	2523.2	2578.8
52.5°	1937.8	2067.5	2254.6	2415.8	2465.8
55°	1808.1	1935.9	2130.5	2289.8	2352.8
57.5°	1658.1	1802.6	2008.2	2169.4	2230.5
60°	1522.8	1663.6	1871.1	2041.5	2108.2
62.5°	1376.5	1521.0	1739.6	1910.0	1974.9
65°	1235.7	1383.9	1600.6	1771.1	1835.9
67.5°	1083.8	1239.4	1461.7	1626.6	1689.6
70°	948.5	1094.9	1313.5	1482.1	1545.1
72.5°	783.6	950.4	1159.7	1326.4	1395.0
75°	642.8	807.7	1007.8	1167.1	1207.9
77.5°	494.6	659.5	857.7	961.5	989.3
80°	363.1	518.7	678.0	733.6	735.5
82.5°	244.5	381.6	472.4	500.2	496.5
85°	135.2	233.4	257.5	250.1	242.7
87.5°	55.6	77.8	63.0	44.5	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)