

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: P474603

Luminaire Tested: **24CZ2-145VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474603
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-145VHE-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13301.0 lumens
Efficiency: N/A
Efficacy: 126.3 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

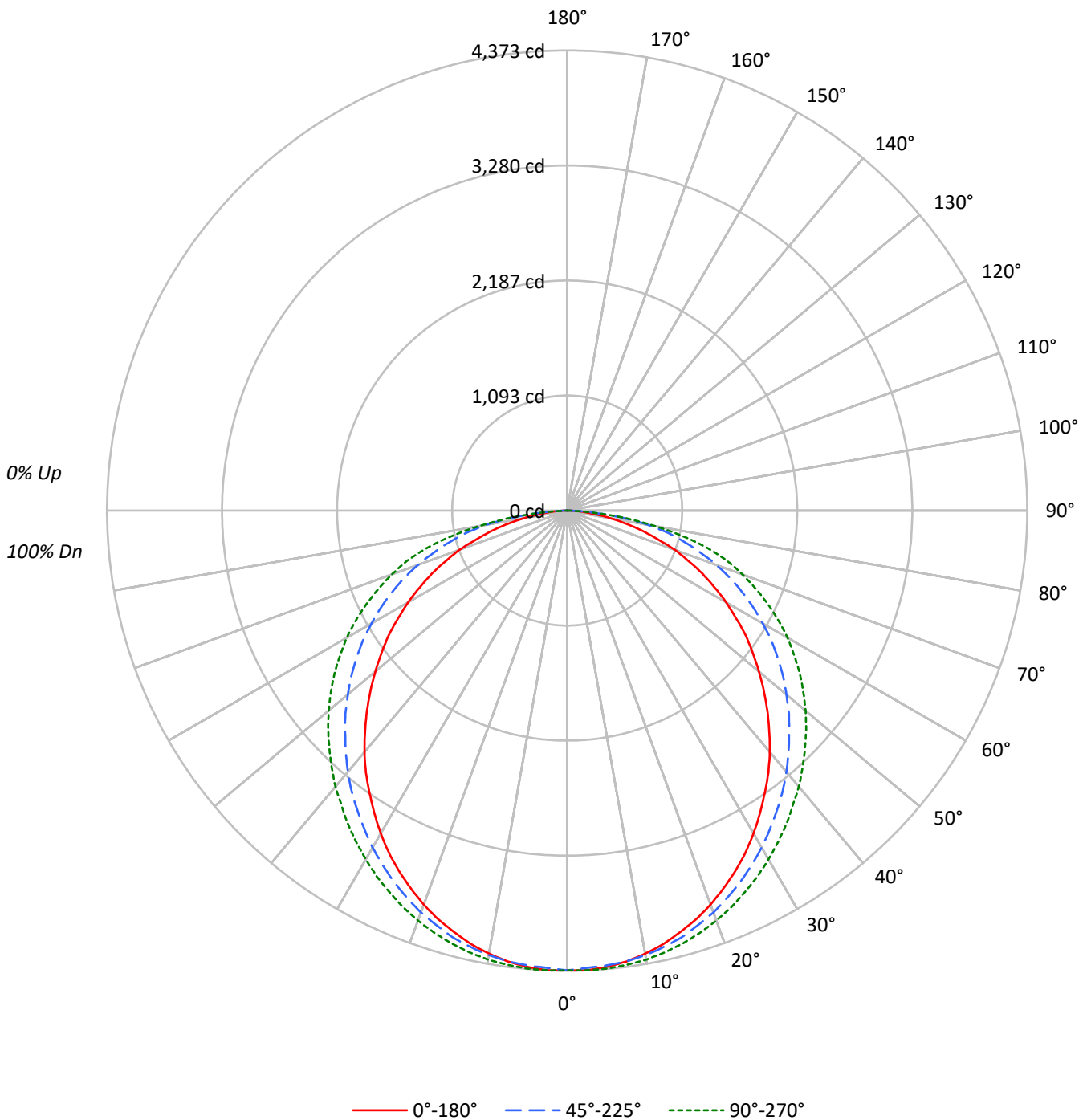
Input Watts (W): 105.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11757	11757	11757
5°	11756	11721	11802
10°	11682	11723	11839
15°	11556	11698	11858
20°	11410	11641	11872
25°	11224	11559	11874
30°	11007	11489	11892
35°	10757	11421	11937
40°	10525	11384	12033
45°	10238	11354	12163
50°	9964	11387	12383
55°	9730	11465	12661
60°	9401	11551	13015
65°	9025	11691	13408
70°	8560	11854	13943
75°	7667	12019	14405
80°	6454	12052	13073
85°	4789	9121	8596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.0	3.1
10°-20°	1186.6	8.9
20°-30°	1796.2	13.5
30°-40°	2172.9	16.3
40°-50°	2293.7	17.2
50°-60°	2162.9	16.3
60°-70°	1783.2	13.4
70°-80°	1169.8	8.8
80°-90°	321.6	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°	3396.8	25.5
0°-40°	5569.7	41.9
0°-60°	10026.3	75.4
0°-90°	13301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13301.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4369	4369	4369	4369	4369	
5°	4352	4352	4339	4369	4369	413
15°	4148	4171	4199	4248	4256	1170
25°	3780	3827	3893	3974	3999	1741
35°	3275	3360	3476	3596	3634	2050
45°	2690	2811	2984	3143	3196	2076
55°	2074	2221	2444	2626	2699	1848
65°	1417	1587	1836	2032	2106	1400
75°	737	926	1156	1339	1386	779
85°	155	268	295	287	278	192
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4368.9	4368.9	4368.9	4368.9	4368.9
2.5°	4373.2	4368.9	4349.8	4375.3	4373.2
5°	4351.9	4351.9	4339.2	4368.9	4368.9
7.5°	4322.2	4324.3	4320.1	4354.1	4354.1
10°	4275.4	4283.9	4290.3	4328.6	4332.8
12.5°	4220.2	4235.1	4247.8	4294.6	4298.8
15°	4147.9	4171.3	4198.9	4247.8	4256.3
17.5°	4073.6	4101.2	4130.9	4194.7	4205.3
20°	3984.3	4016.2	4065.1	4128.8	4145.8
22.5°	3884.5	3929.1	3980.1	4056.6	4077.8
25°	3780.3	3827.1	3893.0	3973.7	3999.2
27.5°	3667.7	3723.0	3797.3	3890.8	3918.5
30°	3542.3	3606.1	3697.5	3797.3	3827.1
32.5°	3410.6	3485.0	3587.0	3697.5	3731.5
35°	3274.6	3359.6	3476.5	3595.5	3633.7
37.5°	3140.7	3225.7	3363.8	3489.2	3525.3
40°	2996.2	3089.7	3240.6	3374.5	3425.5
42.5°	2843.2	2953.7	3113.1	3261.8	3310.7
45°	2690.2	2811.3	2983.5	3142.8	3196.0
47.5°	2535.1	2669.0	2858.1	3019.6	3081.2
50°	2380.0	2522.3	2720.0	2894.2	2958.0
52.5°	2222.7	2371.5	2586.1	2771.0	2828.3
55°	2074.0	2220.6	2443.7	2626.5	2698.7
57.5°	1901.9	2067.6	2303.5	2488.3	2558.5
60°	1746.7	1908.2	2146.2	2341.7	2418.2
62.5°	1578.9	1744.6	1995.4	2190.8	2265.2
65°	1417.4	1587.4	1836.0	2031.5	2105.8
67.5°	1243.1	1421.6	1676.6	1865.7	1938.0
70°	1088.0	1255.9	1506.6	1700.0	1772.2
72.5°	898.9	1090.1	1330.2	1521.5	1600.1
75°	737.4	926.5	1156.0	1338.7	1385.5
77.5°	567.4	756.5	983.9	1102.9	1134.7
80°	416.5	595.0	777.7	841.5	843.6
82.5°	280.5	437.7	541.9	573.7	569.5
85°	155.1	267.7	295.4	286.9	278.4
87.5°	63.7	89.2	72.2	51.0	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)