

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: P473991

Luminaire Tested: **24CZ2-85VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473991
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8358.7 lumens
Efficiency: N/A
Efficacy: 140.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

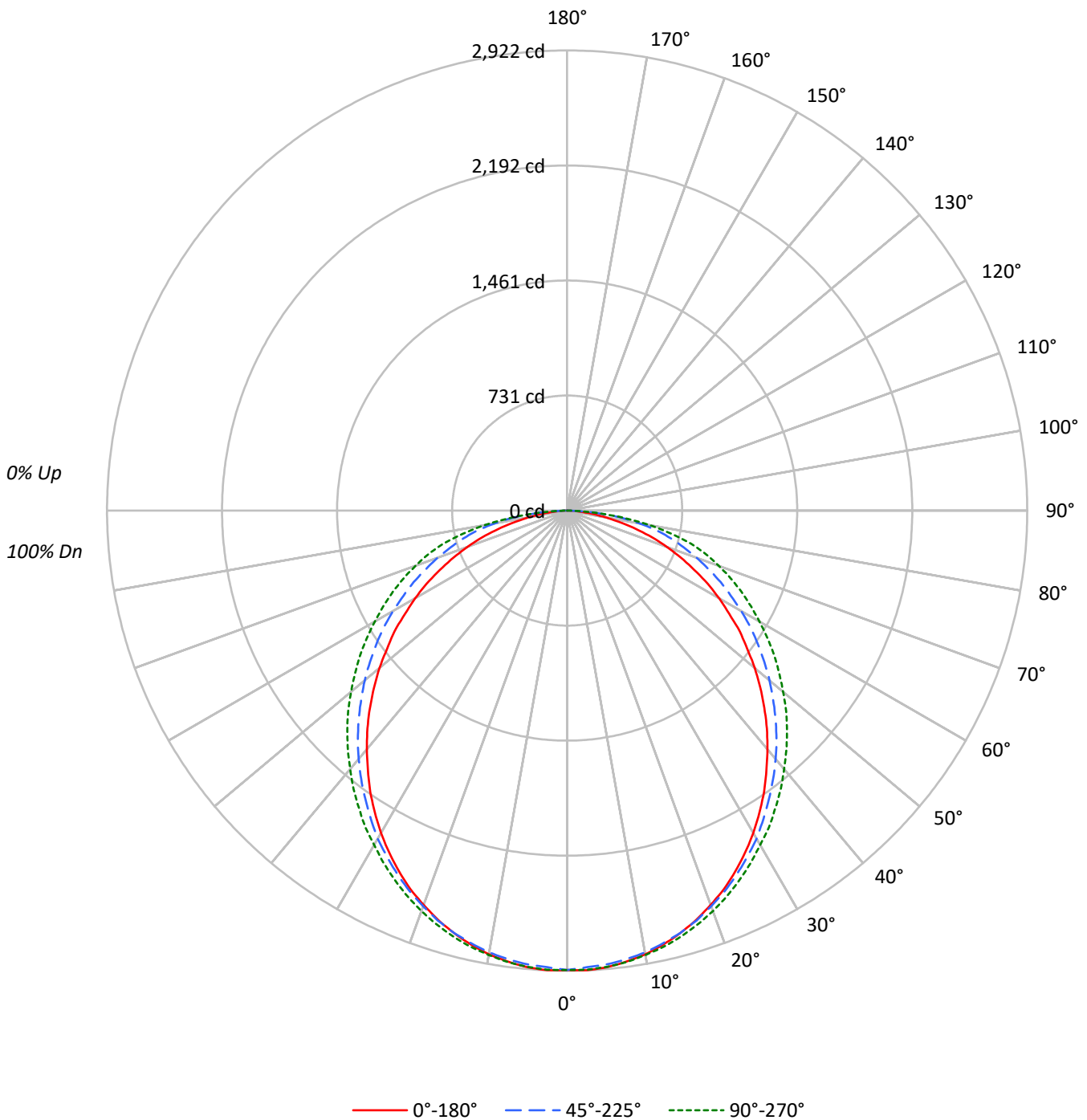
Input Watts (W): 59.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83				
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68				
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57				
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49				
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42				
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37				
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32				
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29				
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26				
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3926	3926	3926
5°	3931	3907	3928
10°	3909	3892	3915
15°	3869	3867	3900
20°	3816	3828	3875
25°	3752	3785	3844
30°	3673	3737	3808
35°	3581	3671	3786
40°	3475	3617	3764
45°	3370	3561	3757
50°	3256	3512	3748
55°	3140	3469	3768
60°	2996	3436	3794
65°	2837	3422	3886
70°	2647	3441	4024
75°	2355	3540	4239
80°	1925	3617	4138
85°	1357	3159	3222



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.8	3.3
10°-20°	785.6	9.4
20°-30°	1177.6	14.1
30°-40°	1402.5	16.8
40°-50°	1446.1	17.3
50°-60°	1319.6	15.8
60°-70°	1055.2	12.6
70°-80°	689.2	8.2
80°-90°	207.0	2.5
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°	2239.0	26.8
0°-40°	3641.6	43.6
0°-60°	6407.3	76.7
0°-90°	8358.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8358.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2918	2918	2918	2918	2918	
5°	2911	2905	2893	2911	2908	276
15°	2778	2779	2776	2800	2800	783
25°	2528	2532	2550	2587	2589	1164
35°	2180	2195	2235	2292	2305	1362
45°	1771	1803	1871	1950	1974	1366
55°	1339	1377	1479	1576	1606	1192
65°	891	952	1075	1181	1221	884
75°	453	529	681	791	816	481
85°	88	158	205	209	209	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2917.6	2917.6	2917.6	2917.6	2917.6
2.5°	2921.7	2917.6	2902.5	2920.3	2917.6
5°	2910.7	2905.2	2892.9	2910.7	2908.0
7.5°	2888.7	2886.0	2873.6	2894.2	2891.5
10°	2861.3	2858.5	2848.9	2869.5	2865.4
12.5°	2822.8	2821.5	2814.6	2839.3	2836.6
15°	2777.5	2778.9	2776.2	2799.5	2799.5
17.5°	2725.4	2724.0	2729.5	2758.3	2755.6
20°	2664.9	2666.3	2673.2	2706.1	2706.1
22.5°	2601.8	2600.4	2615.5	2648.5	2651.2
25°	2527.6	2531.8	2549.6	2586.7	2589.4
27.5°	2448.0	2454.9	2476.8	2519.4	2523.5
30°	2364.3	2372.5	2405.5	2445.3	2450.8
32.5°	2272.3	2290.1	2320.3	2371.1	2384.9
35°	2180.3	2195.4	2235.2	2291.5	2305.2
37.5°	2078.7	2103.4	2148.7	2210.5	2228.3
40°	1978.5	2003.2	2059.5	2124.0	2143.2
42.5°	1876.9	1902.9	1967.5	2040.2	2060.8
45°	1771.1	1802.7	1871.4	1949.6	1974.3
47.5°	1662.7	1699.7	1773.9	1859.0	1886.5
50°	1555.6	1592.7	1677.8	1765.6	1790.4
52.5°	1440.3	1486.9	1577.5	1672.3	1697.0
55°	1338.7	1377.1	1478.7	1576.2	1606.4
57.5°	1219.2	1271.4	1379.8	1478.7	1507.5
60°	1113.5	1161.5	1276.9	1377.1	1410.0
62.5°	1006.4	1055.8	1171.1	1285.1	1315.3
65°	891.1	951.5	1075.0	1180.8	1220.6
67.5°	781.2	844.4	970.7	1083.3	1124.5
70°	672.8	737.3	874.6	989.9	1022.9
72.5°	565.7	632.9	775.7	888.3	926.8
75°	453.1	528.6	681.0	790.8	815.5
77.5°	347.4	431.1	584.9	659.0	676.9
80°	248.5	340.5	466.8	520.4	534.1
82.5°	163.4	252.6	348.7	377.6	373.4
85°	87.9	157.9	204.6	208.7	208.7
87.5°	34.3	63.2	64.5	49.4	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)