

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: P473777

Luminaire Tested: **24CZ2-70HE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473777
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6965.3 lumens
Efficiency: N/A
Efficacy: 141.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

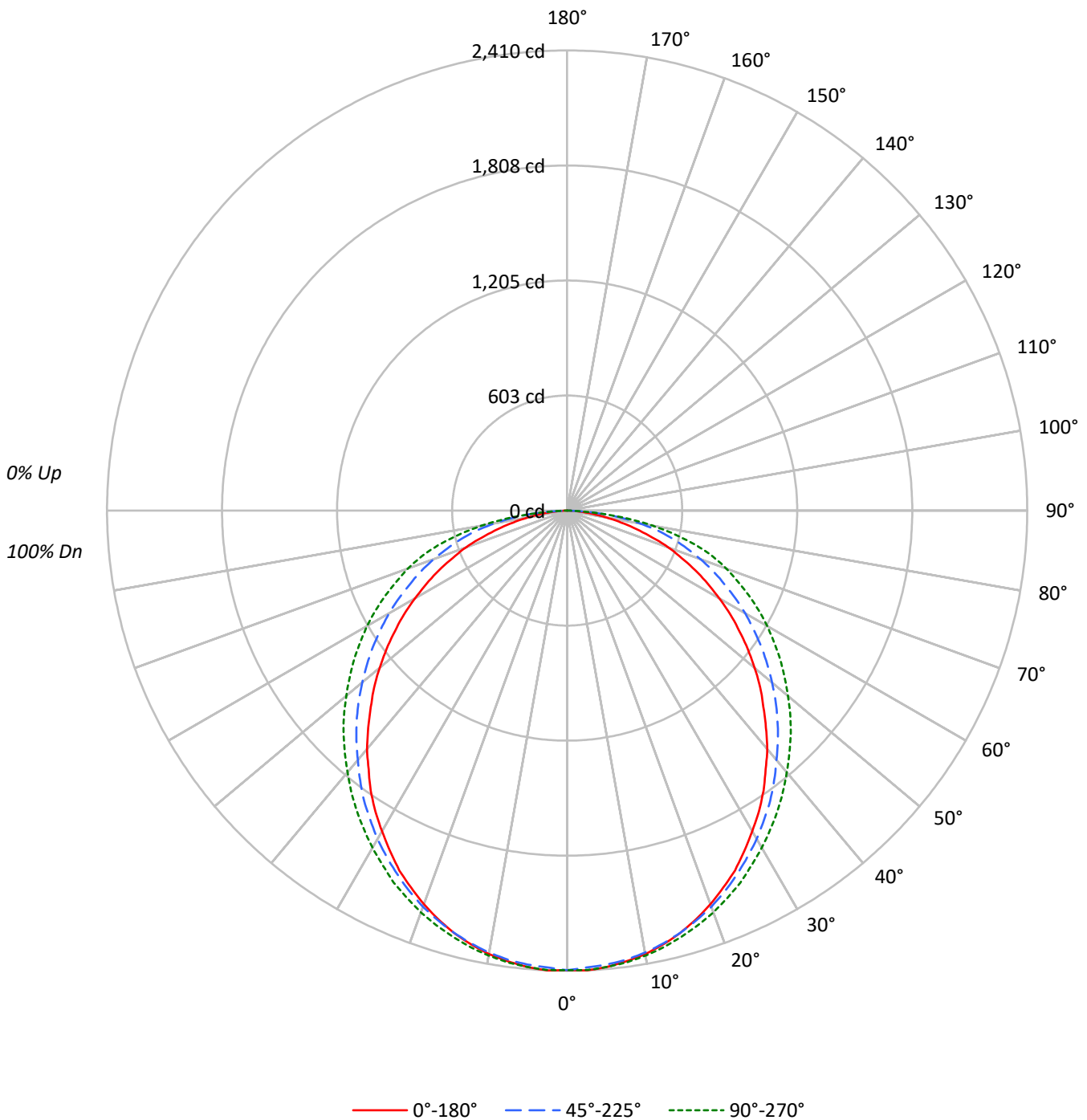
Input Watts (W): 49.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3238	3238	3238
5°	3240	3224	3240
10°	3222	3212	3233
15°	3190	3188	3220
20°	3142	3161	3206
25°	3087	3122	3191
30°	3012	3086	3168
35°	2944	3046	3155
40°	2864	2996	3143
45°	2766	2966	3152
50°	2683	2933	3161
55°	2584	2912	3197
60°	2477	2898	3255
65°	2361	2888	3339
70°	2222	2917	3493
75°	1954	2978	3633
80°	1630	2999	3505
85°	1164	2570	2606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.5	3.3
10°-20°	648.1	9.3
20°-30°	972.3	14.0
30°-40°	1160.8	16.7
40°-50°	1202.4	17.3
50°-60°	1106.9	15.9
60°-70°	892.9	12.8
70°-80°	583.4	8.4
80°-90°	171.0	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°	1847.9	26.5
0°-40°	3008.7	43.2
0°-60°	5317.9	76.3
0°-90°	6965.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6965.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2407	2407	2407	2407	2407	
5°	2399	2397	2387	2400	2399	228
15°	2290	2290	2289	2311	2311	645
25°	2080	2084	2103	2141	2149	956
35°	1792	1808	1854	1905	1921	1120
45°	1454	1490	1558	1628	1656	1124
55°	1102	1149	1241	1332	1363	986
65°	742	792	907	1010	1049	733
75°	376	447	573	672	699	401
85°	75	130	166	177	169	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2406.9	2406.9	2406.9	2406.9	2406.9
2.5°	2410.3	2406.9	2394.6	2409.2	2408.1
5°	2399.1	2396.8	2386.7	2400.2	2399.1
7.5°	2381.1	2379.9	2372.1	2386.7	2386.7
10°	2358.5	2356.3	2350.7	2367.6	2366.4
12.5°	2327.0	2325.9	2322.5	2342.8	2341.7
15°	2289.9	2289.9	2288.8	2311.3	2311.3
17.5°	2244.9	2246.0	2250.5	2276.4	2277.5
20°	2194.3	2198.8	2207.8	2237.0	2239.3
22.5°	2136.9	2145.9	2158.3	2190.9	2194.3
25°	2079.5	2084.0	2103.1	2141.4	2149.2
27.5°	2009.7	2021.0	2045.7	2085.1	2093.0
30°	1938.8	1954.6	1986.1	2026.6	2039.0
32.5°	1869.1	1882.6	1919.7	1965.8	1980.5
35°	1792.5	1808.3	1854.4	1905.1	1920.8
37.5°	1708.1	1732.9	1781.3	1839.8	1856.7
40°	1630.5	1653.0	1705.9	1771.2	1789.2
42.5°	1541.6	1569.7	1633.9	1700.3	1722.8
45°	1453.8	1489.8	1558.5	1628.3	1656.4
47.5°	1371.7	1401.0	1482.0	1560.7	1585.5
50°	1281.7	1315.4	1401.0	1484.2	1510.1
52.5°	1192.8	1233.3	1319.9	1407.7	1435.8
55°	1101.6	1148.9	1241.2	1332.3	1362.7
57.5°	1013.9	1061.1	1156.8	1253.5	1285.0
60°	920.5	971.1	1076.9	1170.3	1209.7
62.5°	830.4	881.1	992.5	1093.8	1130.9
65°	741.5	792.2	907.0	1010.5	1048.7
67.5°	649.3	704.4	827.1	927.2	964.3
70°	564.9	617.8	741.5	848.4	887.8
72.5°	468.1	531.1	657.2	762.9	800.1
75°	375.8	446.7	572.8	671.8	698.8
77.5°	290.3	361.2	487.2	561.5	578.4
80°	210.4	282.4	387.1	438.9	452.4
82.5°	136.2	210.4	280.2	315.1	319.6
85°	75.4	130.5	166.5	176.7	168.8
87.5°	27.0	49.5	48.4	39.4	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)