

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: P474391

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474391
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6638.7 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

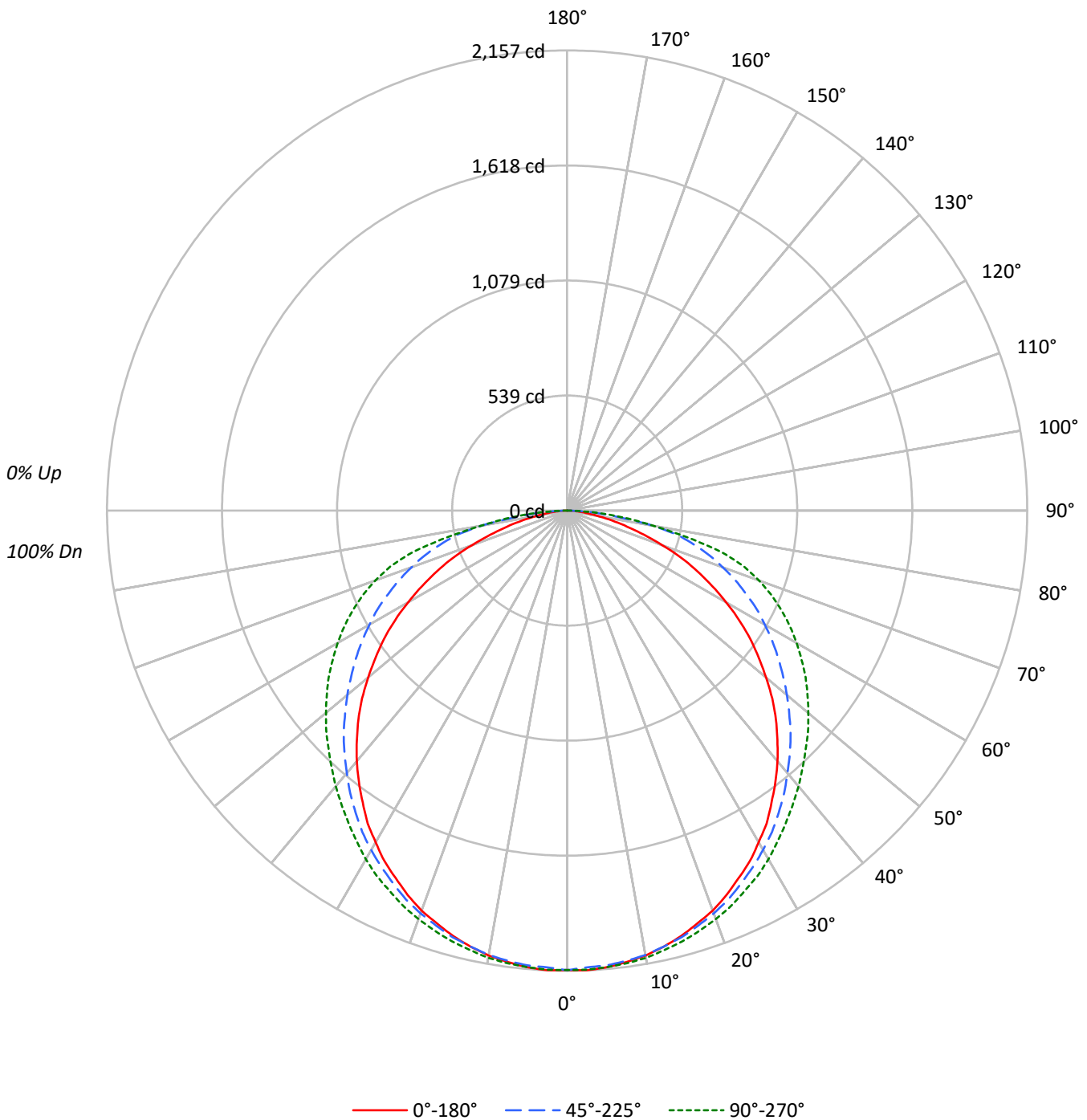
Input Watts (W): 59.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	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	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	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	24		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2898	2898	2898
5°	2902	2890	2902
10°	2893	2890	2908
15°	2876	2884	2911
20°	2857	2877	2917
25°	2822	2864	2921
30°	2789	2854	2932
35°	2744	2839	2935
40°	2695	2822	2963
45°	2633	2819	3009
50°	2548	2816	3089
55°	2458	2836	3201
60°	2318	2879	3343
65°	2141	2947	3531
70°	1869	3050	3762
75°	1517	3208	3886
80°	1120	3145	3145
85°	858	2316	2615



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.0	3.1
10°-20°	585.9	8.8
20°-30°	892.0	13.4
30°-40°	1083.1	16.3
40°-50°	1144.3	17.2
50°-60°	1079.8	16.3
60°-70°	897.8	13.5
70°-80°	590.7	8.9
80°-90°	161.0	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°	1682.0	25.3
0°-40°	2765.1	41.7
0°-60°	4989.2	75.2
0°-90°	6638.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6638.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2154	2154	2154	2154	2154	
5°	2148	2148	2140	2148	2148	204
15°	2065	2068	2071	2090	2090	582
25°	1901	1912	1929	1962	1968	877
35°	1670	1690	1729	1773	1787	1046
45°	1384	1412	1481	1554	1581	1066
55°	1048	1092	1209	1323	1365	933
65°	673	750	926	1062	1109	665
75°	292	425	617	731	748	314
85°	56	122	150	167	169	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2153.9	2153.9	2153.9	2153.9	2153.9
2.5°	2156.8	2153.9	2142.8	2153.9	2153.9
5°	2148.5	2148.5	2139.9	2148.5	2148.5
7.5°	2134.5	2134.5	2128.8	2139.9	2139.9
10°	2117.7	2117.7	2115.1	2128.8	2128.8
12.5°	2092.9	2095.4	2092.9	2109.4	2109.4
15°	2064.9	2067.8	2070.6	2090.0	2090.0
17.5°	2029.0	2034.4	2040.1	2062.1	2064.9
20°	1995.6	1998.2	2009.3	2034.4	2037.3
22.5°	1951.1	1959.4	1973.4	1998.2	2006.7
25°	1900.9	1912.0	1928.9	1962.2	1967.7
27.5°	1853.8	1862.1	1884.4	1920.6	1931.7
30°	1795.4	1809.3	1837.0	1873.2	1887.2
32.5°	1739.7	1753.7	1787.1	1825.9	1837.0
35°	1670.4	1689.8	1728.6	1773.1	1787.1
37.5°	1603.7	1623.1	1670.4	1720.3	1737.2
40°	1534.1	1556.3	1606.5	1664.7	1687.0
42.5°	1459.1	1489.6	1545.2	1609.1	1634.2
45°	1384.0	1412.0	1481.3	1553.5	1581.4
47.5°	1303.6	1337.0	1412.0	1498.1	1531.5
50°	1217.4	1259.1	1345.2	1439.7	1475.9
52.5°	1131.3	1178.4	1275.6	1381.2	1420.3
55°	1047.7	1092.2	1208.9	1323.0	1364.6
57.5°	956.2	1011.8	1139.6	1261.7	1303.6
60°	861.5	922.8	1070.0	1197.8	1242.3
62.5°	767.0	836.6	1003.2	1131.3	1178.4
65°	672.6	750.5	925.6	1061.7	1109.1
67.5°	580.8	666.9	853.2	989.5	1036.6
70°	475.2	583.6	775.3	908.8	956.2
72.5°	378.0	503.2	700.3	825.5	867.2
75°	291.8	425.3	617.0	730.8	747.6
77.5°	213.9	347.4	530.9	569.6	572.5
80°	144.6	277.8	405.9	400.2	405.9
82.5°	94.4	208.5	255.6	286.4	289.0
85°	55.6	122.4	150.0	166.9	169.4
87.5°	27.7	41.6	52.8	55.6	61.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)