

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: P475132

Luminaire Tested: **22CZ2-85VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475132  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-85VHE-HRP-UNV-L830-CD1-U  
Description: 2'X2' 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: 6696.7 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

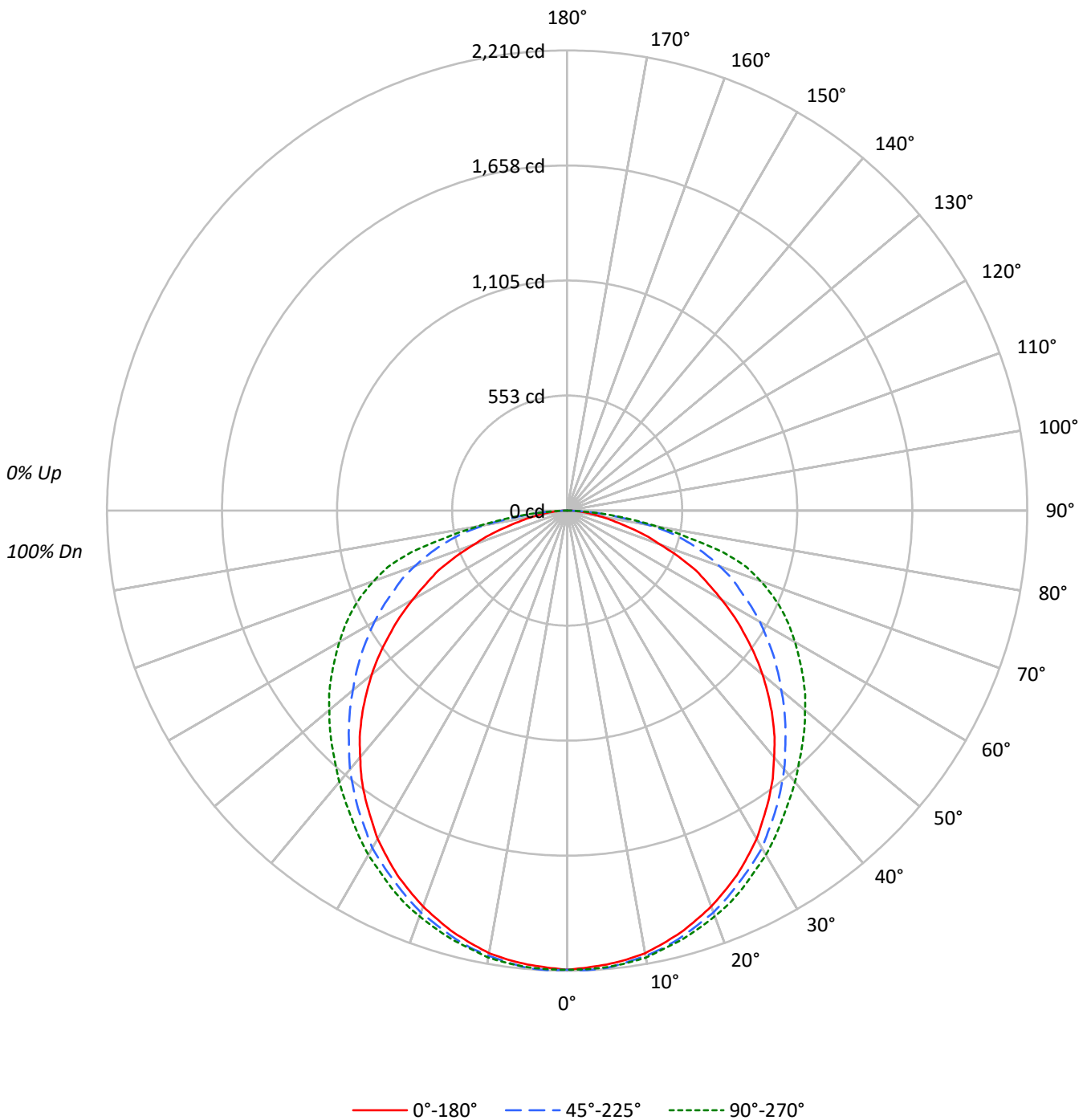
Input Watts (W): 63.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	80	75	84	78	73	80	75	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	52	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°	5934	5934	5934
5°	5911	5956	5945
10°	5899	5933	5957
15°	5849	5908	5943
20°	5795	5879	5939
25°	5733	5832	5933
30°	5657	5815	5933
35°	5551	5746	5926
40°	5431	5698	5980
45°	5305	5643	6076
50°	5129	5624	6242
55°	4895	5669	6481
60°	4615	5752	6798
65°	4358	5864	7264
70°	3723	6116	7777
75°	3119	6370	8082
80°	2557	6152	6743
85°	2211	4563	4956



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.0	3.1
10°-20°	597.8	8.9
20°-30°	906.0	13.5
30°-40°	1094.0	16.3
40°-50°	1149.6	17.2
50°-60°	1081.6	16.2
60°-70°	901.8	13.5
70°-80°	597.6	8.9
80°-90°	159.3	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°	1712.9	25.6
0°-40°	2806.9	41.9
0°-60°	5038.0	75.2
0°-90°	6696.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6696.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2205	2205	2205	2205	2205	
5°	2188	2192	2205	2205	2201	208
15°	2099	2108	2121	2129	2133	592
25°	1931	1943	1964	1990	1998	889
35°	1690	1707	1749	1787	1804	1057
45°	1394	1415	1483	1559	1597	1074
55°	1043	1090	1208	1331	1381	933
65°	684	743	921	1073	1141	666
75°	300	418	613	739	777	326
85°	72	110	148	160	160	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2205.0	2205.0	2205.0	2205.0	2205.0
2.5°	2196.8	2200.9	2209.5	2209.5	2205.0
5°	2188.2	2192.3	2205.0	2205.0	2200.9
7.5°	2175.5	2180.0	2188.2	2196.8	2192.3
10°	2158.7	2162.8	2171.4	2180.0	2180.0
12.5°	2129.3	2133.4	2150.1	2154.6	2154.6
15°	2099.4	2108.0	2120.7	2129.3	2133.4
17.5°	2061.7	2069.9	2086.7	2103.9	2103.9
20°	2023.7	2031.8	2053.1	2069.9	2074.0
22.5°	1977.0	1989.7	2011.0	2031.8	2040.4
25°	1930.7	1943.4	1964.3	1989.7	1998.3
27.5°	1875.5	1888.2	1918.1	1947.5	1951.6
30°	1820.6	1833.3	1871.4	1896.8	1909.5
32.5°	1753.1	1769.9	1807.9	1846.0	1858.7
35°	1689.7	1706.8	1749.0	1787.1	1803.9
37.5°	1622.1	1638.9	1685.6	1732.2	1753.1
40°	1546.0	1567.3	1622.1	1672.9	1702.3
42.5°	1474.4	1495.6	1550.5	1618.0	1647.5
45°	1394.1	1415.0	1482.9	1558.7	1596.7
47.5°	1309.4	1334.8	1415.0	1508.3	1546.0
50°	1225.1	1254.6	1343.4	1449.0	1491.1
52.5°	1136.3	1174.3	1275.8	1390.0	1440.4
55°	1043.3	1090.0	1208.3	1330.7	1381.4
57.5°	954.5	997.1	1136.3	1267.2	1322.1
60°	857.5	912.4	1068.7	1203.8	1263.1
62.5°	764.6	824.0	997.1	1140.8	1203.8
65°	684.4	743.3	921.0	1072.8	1140.8
67.5°	578.8	659.0	857.5	1001.2	1068.7
70°	473.2	582.9	777.3	925.1	988.5
72.5°	392.9	498.5	697.1	844.8	904.2
75°	300.0	418.3	612.7	739.2	777.3
77.5°	223.9	346.3	523.9	587.4	591.5
80°	165.0	266.1	397.0	418.3	435.1
82.5°	114.2	185.8	257.9	282.8	291.4
85°	71.6	109.7	147.8	160.5	160.5
87.5°	38.1	42.2	50.8	50.8	50.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)