

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: P475165

Luminaire Tested: **22CZ2-105VHE-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475165  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-105VHE-HRP-UNV-L835-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8530.5 lumens  
Efficiency: N/A  
Efficacy: 107.3 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

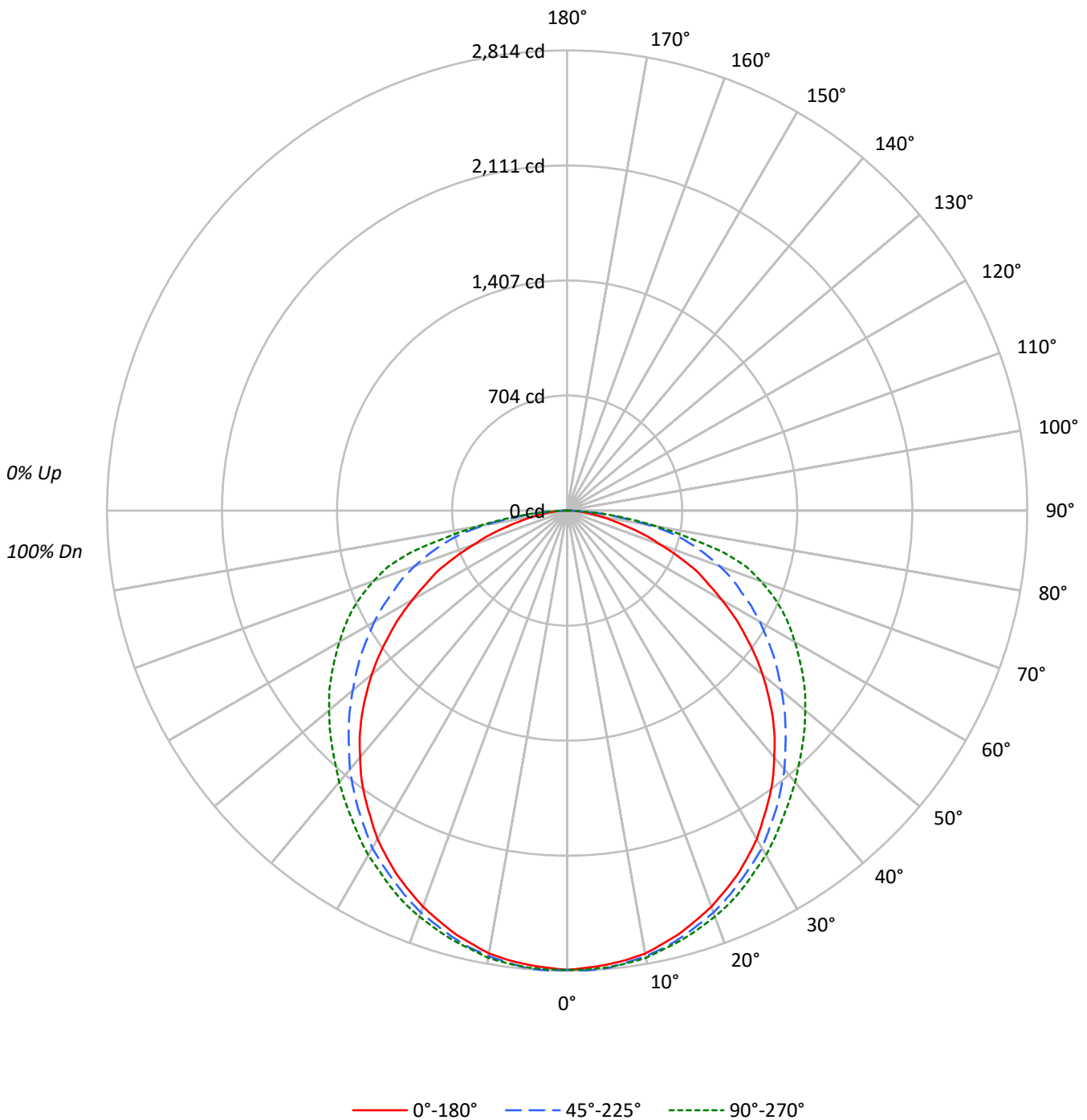
Input Watts (W): 79.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7558	7558	7558
5°	7529	7587	7573
10°	7514	7558	7588
15°	7450	7526	7571
20°	7382	7489	7566
25°	7302	7429	7558
30°	7206	7407	7558
35°	7070	7319	7548
40°	6918	7259	7618
45°	6758	7189	7741
50°	6533	7164	7952
55°	6235	7221	8256
60°	5879	7327	8660
65°	5551	7470	9252
70°	4742	7790	9907
75°	3974	8115	10294
80°	3256	7838	8588
85°	2816	5811	6311



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	266.2	3.1
10°-20°	761.5	8.9
20°-30°	1154.1	13.5
30°-40°	1393.6	16.3
40°-50°	1464.3	17.2
50°-60°	1377.8	16.2
60°-70°	1148.8	13.5
70°-80°	761.2	8.9
80°-90°	202.8	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°	2181.9	25.6
0°-40°	3575.5	41.9
0°-60°	6417.6	75.2
0°-90°	8530.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8530.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2809	2809	2809	2809	2809	
5°	2787	2793	2809	2809	2804	265
15°	2674	2685	2701	2712	2718	754
25°	2459	2476	2502	2534	2546	1132
35°	2152	2174	2228	2276	2298	1346
45°	1776	1802	1889	1986	2034	1368
55°	1329	1388	1539	1695	1760	1189
65°	872	947	1173	1367	1453	848
75°	382	533	780	942	990	415
85°	91	140	188	204	204	106
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2808.8	2808.8	2808.8	2808.8	2808.8
2.5°	2798.4	2803.6	2814.5	2814.5	2808.8
5°	2787.4	2792.6	2808.8	2808.8	2803.6
7.5°	2771.2	2777.0	2787.4	2798.4	2792.6
10°	2749.9	2755.1	2766.0	2777.0	2777.0
12.5°	2712.3	2717.5	2738.9	2744.7	2744.7
15°	2674.3	2685.2	2701.4	2712.3	2717.5
17.5°	2626.3	2636.7	2658.1	2680.0	2680.0
20°	2577.8	2588.2	2615.3	2636.7	2641.9
22.5°	2518.4	2534.5	2561.6	2588.2	2599.2
25°	2459.4	2475.6	2502.2	2534.5	2545.5
27.5°	2389.1	2405.2	2443.3	2480.8	2486.0
30°	2319.2	2335.4	2383.8	2416.2	2432.3
32.5°	2233.2	2254.5	2303.0	2351.5	2367.7
35°	2152.3	2174.2	2227.9	2276.4	2297.8
37.5°	2066.3	2087.7	2147.1	2206.6	2233.2
40°	1969.3	1996.4	2066.3	2131.0	2168.5
42.5°	1878.1	1905.2	1975.1	2061.1	2098.6
45°	1775.9	1802.5	1889.0	1985.5	2034.0
47.5°	1668.0	1700.3	1802.5	1921.4	1969.3
50°	1560.6	1598.1	1711.2	1845.8	1899.5
52.5°	1447.4	1495.9	1625.2	1770.7	1834.8
55°	1329.0	1388.5	1539.2	1695.1	1759.7
57.5°	1215.9	1270.1	1447.4	1614.3	1684.1
60°	1092.3	1162.2	1361.4	1533.4	1609.0
62.5°	974.0	1049.6	1270.1	1453.1	1533.4
65°	871.8	946.9	1173.2	1366.6	1453.1
67.5°	737.3	839.5	1092.3	1275.3	1361.4
70°	602.7	742.5	990.1	1178.4	1259.2
72.5°	500.5	635.1	887.9	1076.2	1151.8
75°	382.2	532.9	780.5	941.6	990.1
77.5°	285.2	441.1	667.4	748.2	753.4
80°	210.1	338.9	505.8	532.9	554.2
82.5°	145.5	236.7	328.5	360.3	371.2
85°	91.2	139.7	188.2	204.4	204.4
87.5°	48.5	53.7	64.7	64.7	64.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)