

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: P474958

Luminaire Tested: **22CZ2-85VHE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474958  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-85VHE-S-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8904.9 lumens  
Efficiency: N/A  
Efficacy: 141.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

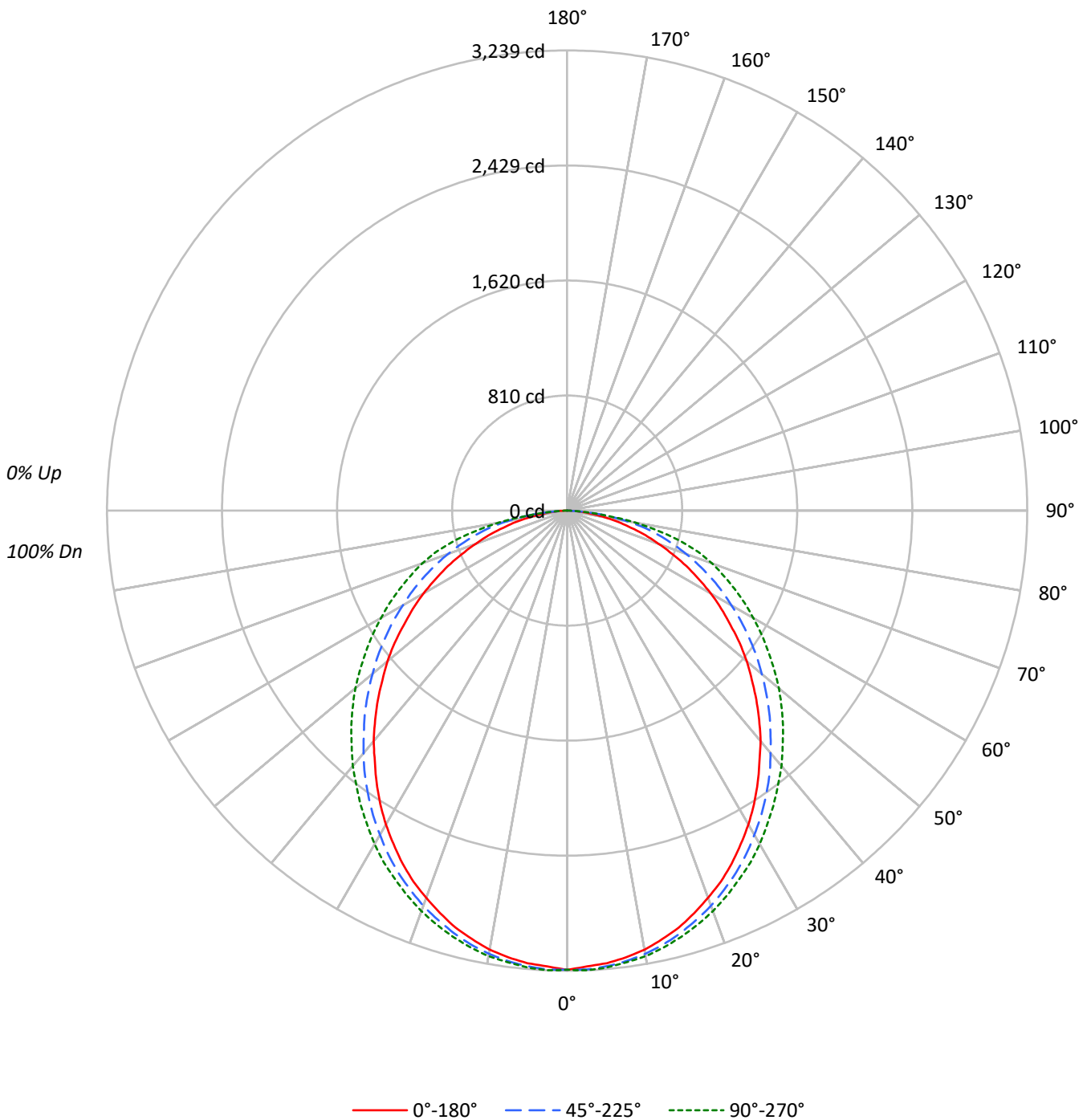
Input Watts (W): 63.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	88	86	83
2	99	90	83	77	96	88	82	77	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63		72	66	61		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		64	58	53		62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26		37	31	26		36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8699	8699	8699
5°	8639	8697	8720
10°	8573	8656	8703
15°	8465	8579	8651
20°	8306	8479	8590
25°	8139	8350	8504
30°	7928	8189	8424
35°	7681	8021	8318
40°	7441	7827	8244
45°	7168	7660	8176
50°	6911	7488	8146
55°	6582	7340	8108
60°	6286	7191	8142
65°	5900	7108	8260
70°	5392	7020	8529
75°	4840	6968	8536
80°	4074	6578	7581
85°	3060	4458	4125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.3	3.4
10°-20°	867.1	9.7
20°-30°	1292.8	14.5
30°-40°	1525.4	17.1
40°-50°	1554.1	17.5
50°-60°	1401.6	15.7
60°-70°	1100.8	12.4
70°-80°	688.2	7.7
80°-90°	169.6	1.9
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°	2465.1	27.7
0°-40°	3990.6	44.8
0°-60°	6946.3	78.0
0°-90°	8904.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8904.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3232	3232	3232	3232	3232	
5°	3198	3204	3220	3226	3228	303
15°	3038	3049	3080	3101	3105	855
25°	2741	2756	2812	2853	2864	1261
35°	2338	2370	2442	2508	2532	1462
45°	1884	1916	2013	2110	2148	1453
55°	1403	1448	1564	1685	1728	1258
65°	927	976	1116	1241	1297	915
75°	466	530	670	784	821	498
85°	99	127	144	142	134	121
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3232.5	3232.5	3232.5	3232.5	3232.5
2.5°	3210.9	3217.4	3232.5	3238.9	3238.9
5°	3198.0	3204.5	3219.5	3226.0	3228.2
7.5°	3172.1	3180.7	3198.0	3206.6	3206.6
10°	3137.6	3148.4	3167.8	3180.7	3185.1
12.5°	3090.2	3103.2	3129.0	3144.1	3148.4
15°	3038.5	3049.3	3079.5	3101.0	3105.3
17.5°	2971.7	2989.0	3021.3	3049.3	3055.8
20°	2900.6	2920.0	2960.9	2993.3	2999.7
22.5°	2827.3	2842.4	2887.7	2926.5	2935.1
25°	2741.1	2756.2	2812.2	2853.2	2864.0
27.5°	2646.3	2672.2	2728.2	2775.6	2792.9
30°	2551.5	2577.4	2635.5	2691.6	2711.0
32.5°	2448.1	2476.1	2542.9	2601.1	2620.5
35°	2338.2	2370.5	2441.6	2508.4	2532.1
37.5°	2223.9	2260.6	2340.3	2411.4	2437.3
40°	2118.3	2144.2	2228.2	2310.1	2346.8
42.5°	1999.8	2034.3	2118.3	2211.0	2245.5
45°	1883.5	1915.8	2012.7	2109.7	2148.5
47.5°	1762.8	1803.7	1900.7	2008.4	2047.2
50°	1650.7	1685.2	1788.6	1902.8	1945.9
52.5°	1530.0	1566.7	1678.7	1797.3	1836.0
55°	1402.9	1448.1	1564.5	1685.2	1728.3
57.5°	1286.5	1329.6	1452.5	1577.4	1622.7
60°	1168.0	1211.1	1336.1	1463.2	1512.8
62.5°	1043.0	1092.6	1228.3	1351.2	1407.2
65°	926.6	976.2	1116.3	1241.3	1297.3
67.5°	803.8	862.0	1002.1	1133.5	1189.5
70°	685.3	754.2	892.2	1021.5	1084.0
72.5°	579.7	635.7	780.1	915.9	967.6
75°	465.5	530.1	670.2	784.4	821.0
77.5°	368.5	424.5	558.1	633.6	657.3
80°	262.9	325.4	424.5	469.8	489.2
82.5°	174.6	226.3	288.8	297.4	293.1
85°	99.1	127.1	144.4	142.2	133.6
87.5°	38.8	43.1	32.3	19.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)