

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: P474256

Luminaire Tested: **24CZ2-160VHE-RDP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474256  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-160VHE-RDP-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10785.8 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

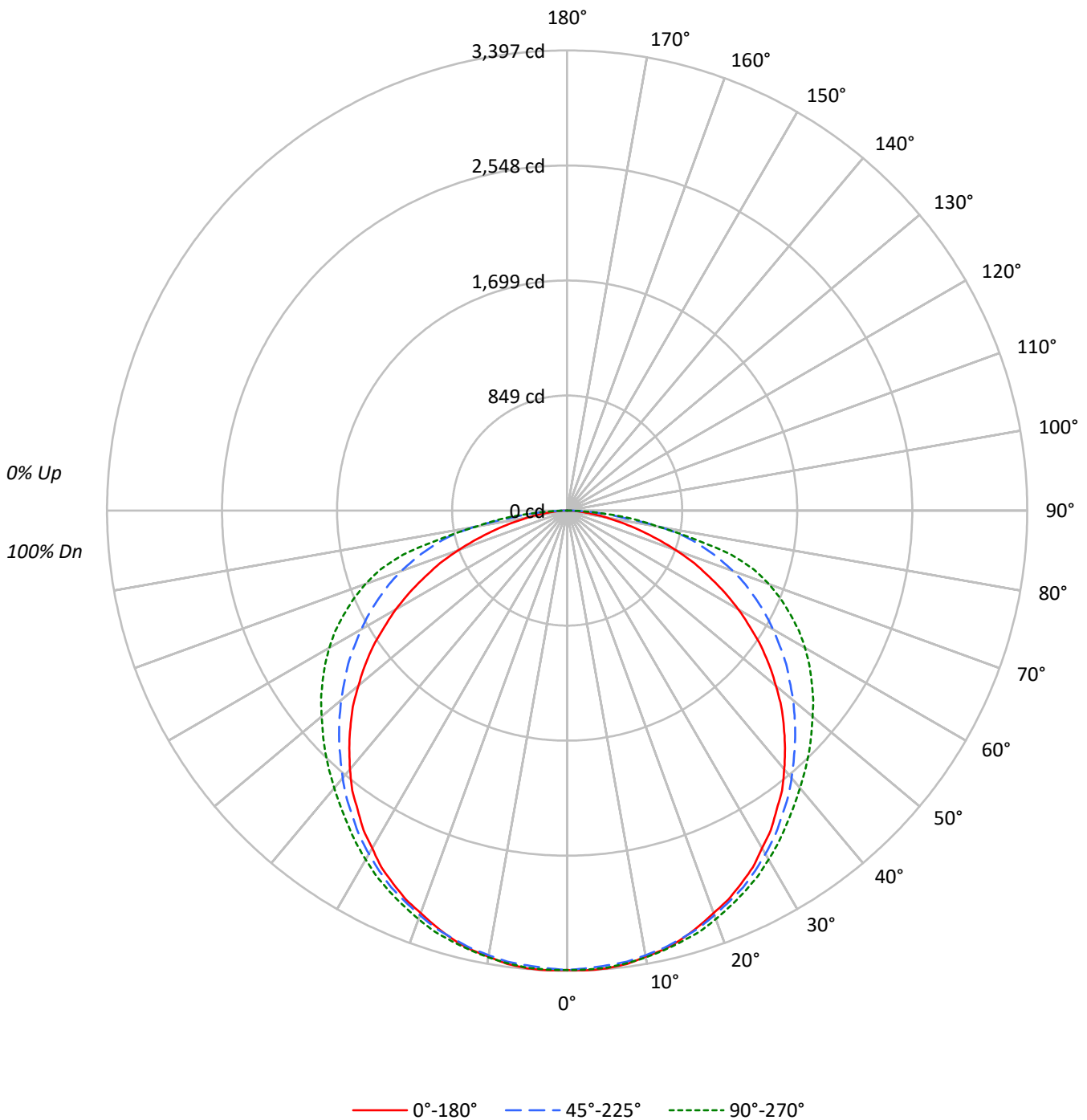
Input Watts (W): 118.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89		92	89	87		88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		34	28	24	22

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

	0°	45°	90°
0°	4564	4564	4564
5°	4581	4552	4574
10°	4568	4554	4576
15°	4561	4553	4583
20°	4527	4550	4596
25°	4511	4559	4607
30°	4472	4546	4621
35°	4428	4534	4640
40°	4379	4529	4698
45°	4306	4530	4804
50°	4210	4558	4950
55°	4103	4631	5171
60°	3931	4722	5456
65°	3679	4888	5791
70°	3346	5115	6229
75°	2835	5396	6509
80°	2239	5429	5263
85°	1653	4131	4628



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.8	3.0
10°-20°	926.0	8.6
20°-30°	1416.0	13.1
30°-40°	1731.0	16.0
40°-50°	1845.0	17.1
50°-60°	1764.0	16.4
60°-70°	1494.3	13.9
70°-80°	1004.3	9.3
80°-90°	283.4	2.6
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°	2663.8	24.7
0°-40°	4394.8	40.7
0°-60°	8003.8	74.2
0°-90°	10785.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10785.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3392	3392	3392	3392	3392	
5°	3392	3387	3371	3387	3387	322
15°	3274	3274	3269	3296	3290	923
25°	3039	3049	3071	3098	3103	1401
35°	2696	2718	2760	2814	2825	1689
45°	2263	2301	2381	2483	2525	1746
55°	1749	1814	1974	2129	2204	1558
65°	1156	1273	1535	1739	1819	1147
75°	545	744	1038	1214	1252	584
85°	107	220	268	289	300	132
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3392.0	3392.0	3392.0	3392.0	3392.0
2.5°	3397.3	3397.3	3381.3	3392.0	3392.0
5°	3392.0	3386.6	3370.6	3386.6	3386.6
7.5°	3375.9	3370.6	3359.9	3375.9	3370.6
10°	3343.8	3343.8	3333.1	3349.2	3349.2
12.5°	3317.1	3311.7	3306.4	3327.8	3322.4
15°	3274.2	3274.2	3268.9	3295.6	3290.3
17.5°	3220.7	3226.1	3231.4	3252.8	3258.2
20°	3161.8	3172.5	3177.9	3210.0	3210.0
22.5°	3108.3	3113.7	3124.4	3156.5	3156.5
25°	3038.7	3049.4	3070.8	3097.6	3103.0
27.5°	2969.1	2974.5	3001.3	3038.7	3044.1
30°	2878.1	2894.2	2926.3	2969.1	2974.5
32.5°	2797.8	2813.9	2851.4	2894.2	2904.9
35°	2696.1	2717.6	2760.4	2813.9	2824.6
37.5°	2605.2	2621.2	2674.7	2733.6	2749.7
40°	2493.3	2524.9	2578.4	2648.0	2674.7
42.5°	2380.9	2413.0	2477.2	2567.7	2599.8
45°	2263.1	2300.6	2380.9	2482.6	2524.9
47.5°	2145.4	2188.2	2279.2	2396.9	2445.1
50°	2011.5	2065.1	2177.5	2311.3	2364.8
52.5°	1883.1	1947.3	2070.4	2220.3	2289.9
55°	1749.3	1813.5	1974.1	2129.3	2204.2
57.5°	1599.4	1685.0	1861.7	2038.3	2118.6
60°	1460.7	1540.5	1754.6	1947.3	2027.6
62.5°	1310.9	1417.9	1647.6	1851.0	1931.2
65°	1155.6	1273.4	1535.2	1738.6	1818.8
67.5°	1016.5	1144.9	1423.3	1626.1	1706.4
70°	850.5	1011.1	1300.2	1503.0	1583.3
72.5°	695.3	872.0	1171.7	1369.8	1444.7
75°	545.4	743.5	1037.9	1214.5	1252.0
77.5°	406.8	615.0	898.7	973.7	946.9
80°	289.0	492.4	700.7	663.2	679.3
82.5°	187.3	374.7	433.6	492.4	508.0
85°	107.1	219.5	267.6	289.0	299.8
87.5°	48.2	80.3	107.1	107.1	101.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)