

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: P474140

Luminaire Tested: **24CZ2-80VHE-S-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474140  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-80VHE-S-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8334.9 lumens  
Efficiency: N/A  
Efficacy: 148.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

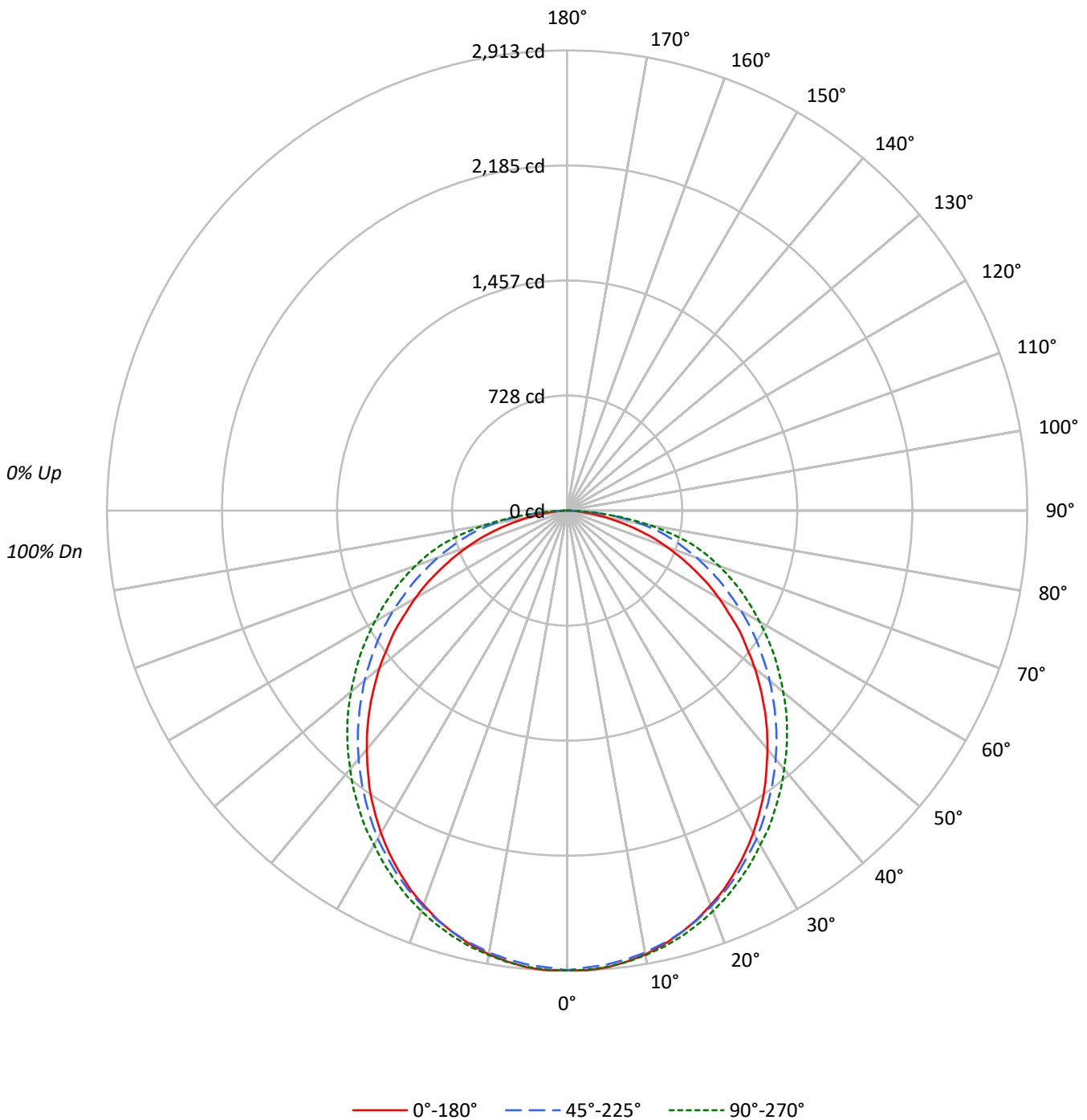
Input Watts (W): 56.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32					32			
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24					24			

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

	0°	45°	90°
0°	3914	3914	3914
5°	3920	3896	3916
10°	3898	3881	3904
15°	3858	3856	3888
20°	3805	3817	3864
25°	3742	3774	3833
30°	3663	3727	3797
35°	3571	3661	3776
40°	3465	3607	3754
45°	3361	3551	3746
50°	3247	3502	3737
55°	3131	3459	3757
60°	2988	3426	3784
65°	2829	3413	3875
70°	2639	3431	4012
75°	2349	3530	4227
80°	1920	3607	4127
85°	1352	3149	3213



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	275.0	3.3
10°-20°	783.3	9.4
20°-30°	1174.2	14.1
30°-40°	1398.5	16.8
40°-50°	1442.0	17.3
50°-60°	1315.8	15.8
60°-70°	1052.2	12.6
70°-80°	687.3	8.2
80°-90°	206.4	2.5
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°	2232.6	26.8
0°-40°	3631.2	43.6
0°-60°	6389.0	76.7
0°-90°	8334.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8334.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2909	2909	2909	2909	2909	
5°	2902	2897	2885	2902	2900	275
15°	2770	2771	2768	2792	2792	781
25°	2520	2524	2542	2579	2582	1160
35°	2174	2189	2229	2285	2299	1358
45°	1766	1798	1866	1944	1969	1362
55°	1335	1373	1474	1572	1602	1189
65°	888	949	1072	1177	1217	881
75°	452	527	679	789	813	480
85°	88	157	204	208	208	111
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2909.2	2909.2	2909.2	2909.2	2909.2
2.5°	2913.3	2909.2	2894.2	2912.0	2909.2
5°	2902.4	2896.9	2884.6	2902.4	2899.7
7.5°	2880.5	2877.7	2865.4	2886.0	2883.2
10°	2853.1	2850.4	2840.8	2861.3	2857.2
12.5°	2814.8	2813.4	2806.6	2831.2	2828.5
15°	2769.6	2771.0	2768.2	2791.5	2791.5
17.5°	2717.6	2716.2	2721.7	2750.4	2747.7
20°	2657.3	2658.7	2665.5	2698.4	2698.4
22.5°	2594.4	2593.0	2608.0	2640.9	2643.6
25°	2520.4	2524.5	2542.3	2579.3	2582.0
27.5°	2441.0	2447.9	2469.8	2512.2	2516.3
30°	2357.5	2365.7	2398.6	2438.3	2443.8
32.5°	2265.8	2283.6	2313.7	2364.4	2378.0
35°	2174.1	2189.1	2228.8	2284.9	2298.6
37.5°	2072.7	2097.4	2142.6	2204.2	2222.0
40°	1972.8	1997.4	2053.6	2117.9	2137.1
42.5°	1871.5	1897.5	1961.9	2034.4	2054.9
45°	1766.1	1797.6	1866.0	1944.1	1968.7
47.5°	1657.9	1694.9	1768.8	1853.7	1881.1
50°	1551.1	1588.1	1673.0	1760.6	1785.2
52.5°	1436.1	1482.7	1573.0	1667.5	1692.1
55°	1334.8	1373.2	1474.5	1571.7	1601.8
57.5°	1215.7	1267.7	1375.9	1474.5	1503.2
60°	1110.3	1158.2	1273.2	1373.2	1406.0
62.5°	1003.5	1052.8	1167.8	1281.4	1311.6
65°	888.5	948.8	1072.0	1177.4	1217.1
67.5°	779.0	842.0	967.9	1080.2	1121.3
70°	670.8	735.2	872.1	987.1	1019.9
72.5°	564.0	631.1	773.5	885.8	924.1
75°	451.8	527.1	679.0	788.6	813.2
77.5°	346.4	429.9	583.2	657.1	674.9
80°	247.8	339.5	465.5	518.9	532.6
82.5°	162.9	251.9	347.7	376.5	372.4
85°	87.6	157.4	204.0	208.1	208.1
87.5°	34.2	63.0	64.3	49.3	46.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)