

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: P474440

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474440  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-80VHE-HRP-UNV-L835-CD1-U  
Description: 2'X4' 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: 6496.3 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

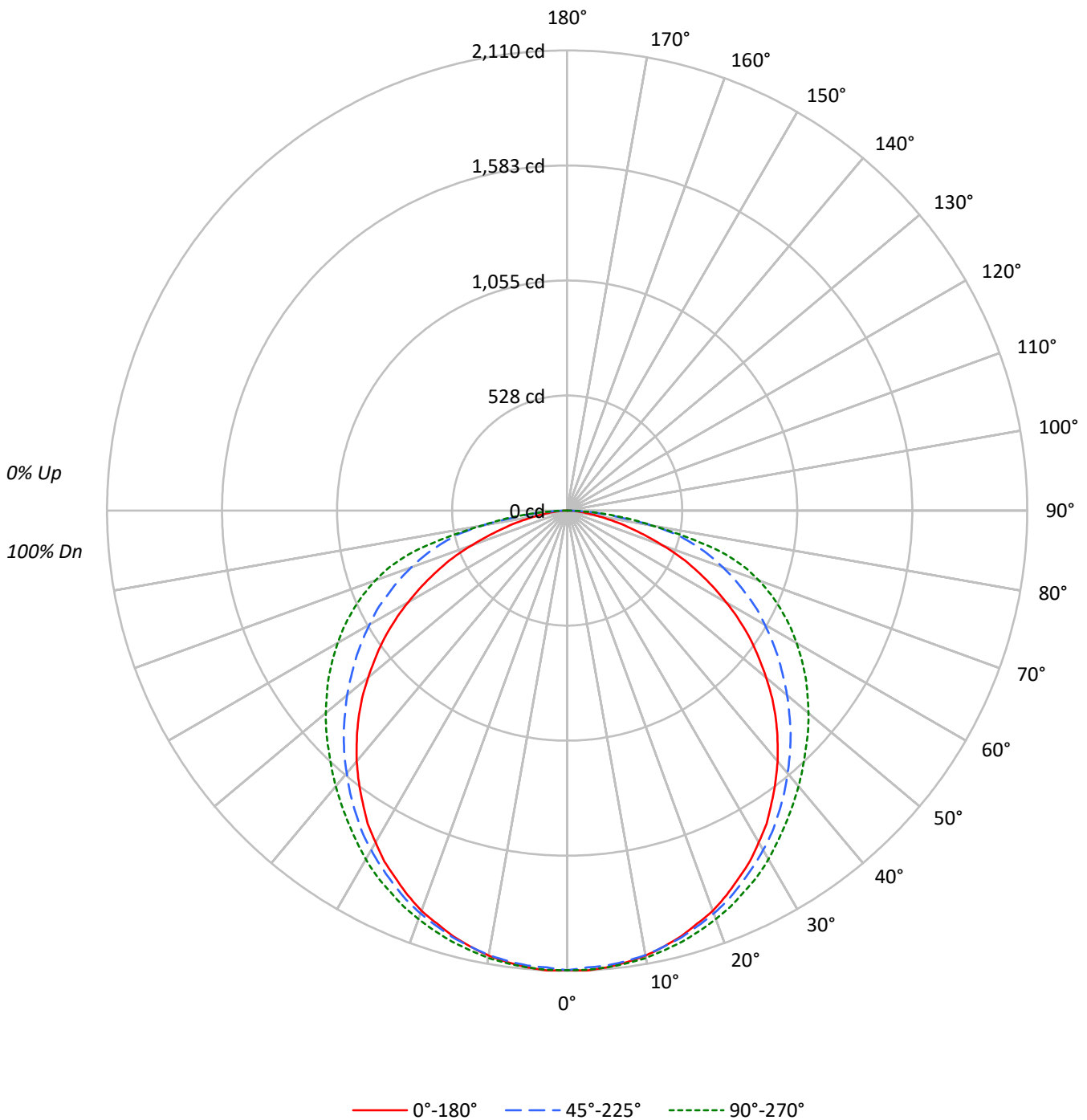
Input Watts (W): 56.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24

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

	0°	45°	90°
0°	2836	2836	2836
5°	2840	2828	2840
10°	2831	2828	2846
15°	2815	2822	2849
20°	2796	2815	2855
25°	2761	2802	2858
30°	2730	2793	2869
35°	2685	2778	2872
40°	2637	2761	2899
45°	2577	2758	2945
50°	2494	2756	3023
55°	2405	2775	3133
60°	2268	2817	3271
65°	2096	2884	3455
70°	1829	2985	3681
75°	1485	3139	3803
80°	1096	3078	3078
85°	840	2266	2560



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.7	3.1
10°-20°	573.4	8.8
20°-30°	872.9	13.4
30°-40°	1059.9	16.3
40°-50°	1119.8	17.2
50°-60°	1056.6	16.3
60°-70°	878.6	13.5
70°-80°	578.0	8.9
80°-90°	157.5	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°	1645.9	25.3
0°-40°	2705.8	41.7
0°-60°	4882.2	75.2
0°-90°	6496.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6496.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2108	2108	2108	2108	2108	
5°	2102	2102	2094	2102	2102	200
15°	2021	2023	2026	2045	2045	570
25°	1860	1871	1888	1920	1925	858
35°	1635	1654	1692	1735	1749	1023
45°	1354	1382	1450	1520	1548	1043
55°	1025	1069	1183	1295	1335	913
65°	658	734	906	1039	1085	651
75°	286	416	604	715	732	308
85°	54	120	147	163	166	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2107.7	2107.7	2107.7	2107.7	2107.7
2.5°	2110.5	2107.7	2096.8	2107.7	2107.7
5°	2102.4	2102.4	2094.0	2102.4	2102.4
7.5°	2088.7	2088.7	2083.2	2094.0	2094.0
10°	2072.3	2072.3	2069.8	2083.2	2083.2
12.5°	2048.0	2050.5	2048.0	2064.2	2064.2
15°	2020.6	2023.4	2026.2	2045.2	2045.2
17.5°	1985.5	1990.8	1996.3	2017.8	2020.6
20°	1952.8	1955.3	1966.2	1990.8	1993.6
22.5°	1909.3	1917.4	1931.0	1955.3	1963.7
25°	1860.1	1871.0	1887.5	1920.1	1925.4
27.5°	1814.1	1822.2	1843.9	1879.4	1890.3
30°	1756.9	1770.5	1797.6	1833.1	1846.7
32.5°	1702.4	1716.1	1748.8	1786.7	1797.6
35°	1634.6	1653.6	1691.5	1735.1	1748.8
37.5°	1569.3	1588.3	1634.6	1683.4	1699.9
40°	1501.2	1522.9	1572.1	1629.0	1650.8
42.5°	1427.8	1457.6	1512.1	1574.6	1599.1
45°	1354.3	1381.7	1449.5	1520.2	1547.5
47.5°	1275.6	1308.3	1381.7	1466.0	1498.7
50°	1191.3	1232.1	1316.4	1408.8	1444.2
52.5°	1107.0	1153.1	1248.3	1351.6	1389.8
55°	1025.2	1068.8	1183.0	1294.6	1335.4
57.5°	935.6	990.1	1115.1	1234.6	1275.6
60°	843.0	903.0	1047.0	1172.1	1215.6
62.5°	750.6	818.7	981.7	1107.0	1153.1
65°	658.2	734.4	905.8	1038.9	1085.3
67.5°	568.3	652.6	834.9	968.3	1014.4
70°	465.0	571.1	758.7	889.3	935.6
72.5°	369.8	492.4	685.3	807.8	848.6
75°	285.6	416.2	603.8	715.1	731.6
77.5°	209.3	340.0	519.5	557.4	560.2
80°	141.5	271.9	397.2	391.6	397.2
82.5°	92.4	204.0	250.1	280.2	282.8
85°	54.4	119.7	146.8	163.3	165.8
87.5°	27.1	40.8	51.6	54.4	59.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)