

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: P474477

Luminaire Tested: **24CZ2-70HE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474477
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5958.5 lumens
Efficiency: N/A
Efficacy: 120.9 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

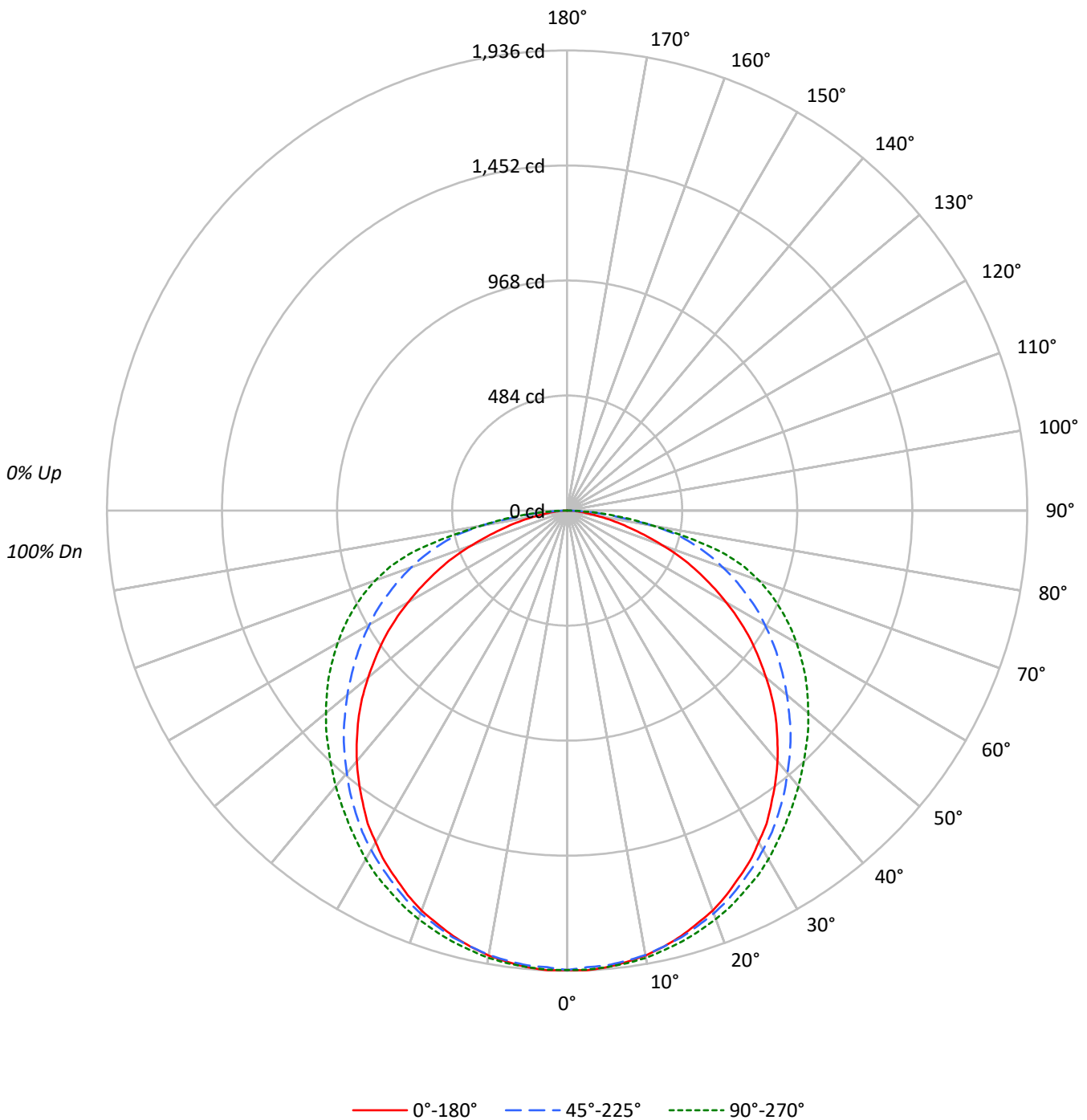
Input Watts (W): 49.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	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	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	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	24		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2601	2601	2601
5°	2605	2594	2605
10°	2597	2594	2610
15°	2582	2589	2613
20°	2565	2582	2618
25°	2533	2570	2622
30°	2504	2562	2632
35°	2463	2548	2635
40°	2418	2533	2659
45°	2364	2530	2701
50°	2287	2527	2773
55°	2206	2545	2873
60°	2081	2584	3000
65°	1922	2645	3169
70°	1678	2738	3376
75°	1362	2879	3488
80°	1006	2823	2823
85°	770	2079	2348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.1	3.1
10°-20°	525.9	8.8
20°-30°	800.6	13.4
30°-40°	972.1	16.3
40°-50°	1027.1	17.2
50°-60°	969.1	16.3
60°-70°	805.8	13.5
70°-80°	530.1	8.9
80°-90°	144.5	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°	1509.7	25.3
0°-40°	2481.8	41.7
0°-60°	4478.0	75.2
0°-90°	5958.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5958.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1933	1933	1933	1933	1933	
5°	1928	1928	1921	1928	1928	183
15°	1853	1856	1858	1876	1876	523
25°	1706	1716	1731	1761	1766	787
35°	1499	1517	1552	1591	1604	938
45°	1242	1267	1330	1394	1419	957
55°	940	980	1085	1187	1225	838
65°	604	674	831	953	995	597
75°	262	382	554	656	671	282
85°	50	110	135	150	152	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1933.2	1933.2	1933.2	1933.2	1933.2
2.5°	1935.8	1933.2	1923.2	1933.2	1933.2
5°	1928.4	1928.4	1920.7	1928.4	1928.4
7.5°	1915.8	1915.8	1910.7	1920.7	1920.7
10°	1900.7	1900.7	1898.4	1910.7	1910.7
12.5°	1878.4	1880.7	1878.4	1893.3	1893.3
15°	1853.4	1855.9	1858.5	1875.9	1875.9
17.5°	1821.1	1826.0	1831.1	1850.8	1853.4
20°	1791.1	1793.4	1803.4	1826.0	1828.5
22.5°	1751.2	1758.6	1771.2	1793.4	1801.1
25°	1706.1	1716.1	1731.2	1761.2	1766.0
27.5°	1663.9	1671.3	1691.3	1723.8	1733.8
30°	1611.4	1624.0	1648.8	1681.3	1693.9
32.5°	1561.5	1574.0	1604.0	1638.8	1648.8
35°	1499.3	1516.7	1551.5	1591.4	1604.0
37.5°	1439.4	1456.8	1499.3	1544.1	1559.2
40°	1376.9	1396.9	1441.9	1494.2	1514.1
42.5°	1309.6	1337.0	1386.9	1444.2	1466.8
45°	1242.2	1267.3	1329.5	1394.3	1419.4
47.5°	1170.0	1200.0	1267.3	1344.6	1374.6
50°	1092.7	1130.1	1207.4	1292.2	1324.7
52.5°	1015.4	1057.6	1144.9	1239.7	1274.7
55°	940.4	980.3	1085.0	1187.4	1224.8
57.5°	858.2	908.1	1022.8	1132.4	1170.0
60°	773.2	828.2	960.3	1075.0	1115.0
62.5°	688.4	750.9	900.4	1015.4	1057.6
65°	603.7	673.6	830.8	952.9	995.4
67.5°	521.3	598.6	765.8	888.1	930.4
70°	426.5	523.8	695.9	815.7	858.2
72.5°	339.2	451.6	628.5	740.9	778.3
75°	261.9	381.7	553.8	655.9	671.0
77.5°	192.0	311.8	476.5	511.3	513.8
80°	129.8	249.4	364.3	359.2	364.3
82.5°	84.7	187.2	229.4	257.0	259.4
85°	49.9	109.8	134.7	149.8	152.1
87.5°	24.8	37.4	47.4	49.9	54.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)