

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: P474476

Luminaire Tested: **24CZ2-65HE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474476
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65HE-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: 5594.5 lumens
Efficiency: N/A
Efficacy: 114.4 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

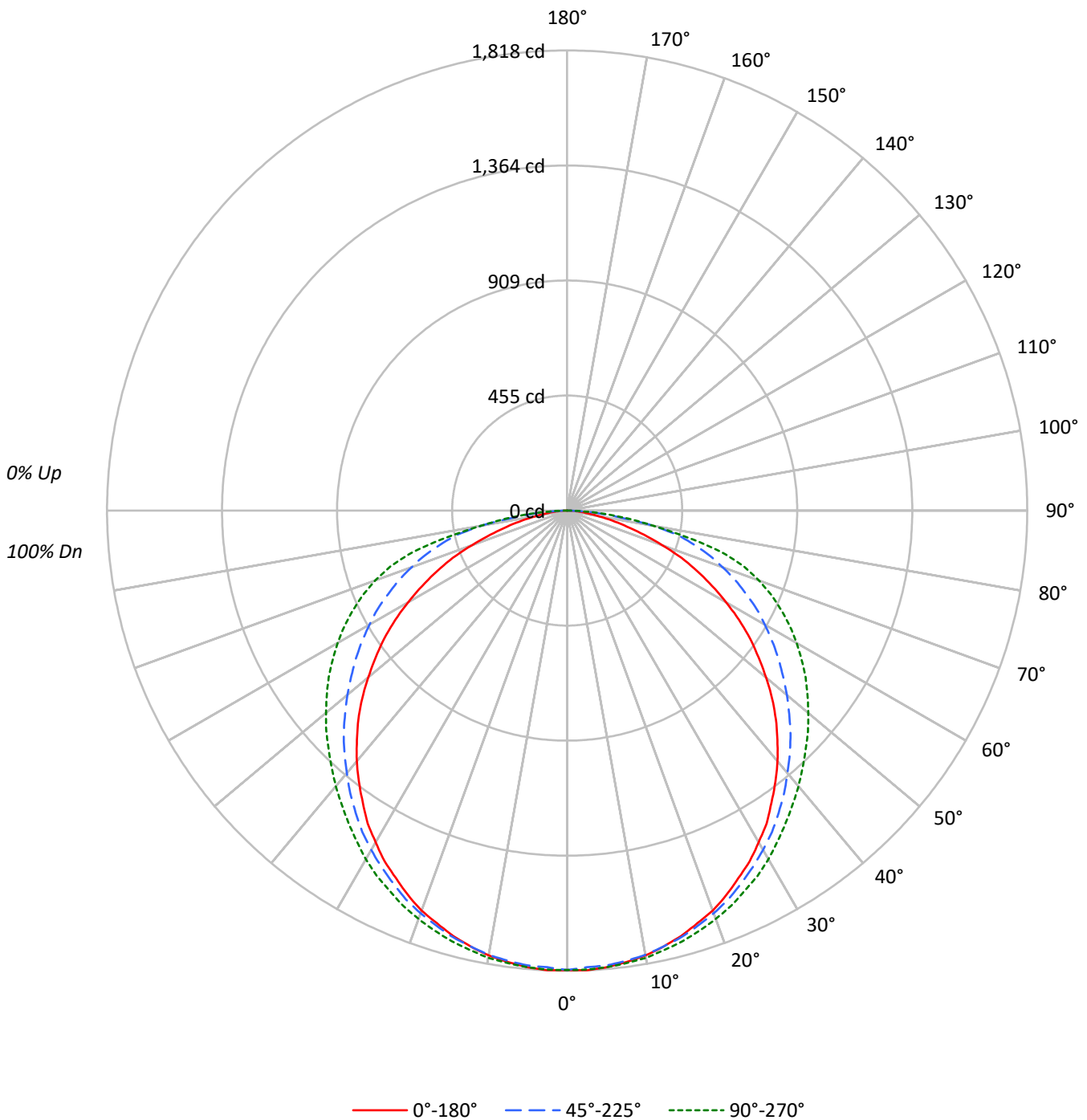
Input Watts (W): 48.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2442	2442	2442
5°	2445	2436	2445
10°	2438	2435	2451
15°	2424	2431	2453
20°	2408	2424	2458
25°	2378	2413	2462
30°	2351	2405	2471
35°	2312	2393	2474
40°	2271	2378	2497
45°	2219	2375	2536
50°	2147	2373	2603
55°	2071	2390	2698
60°	1954	2426	2817
65°	1805	2483	2975
70°	1576	2570	3170
75°	1278	2703	3275
80°	945	2651	2651
85°	724	1951	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.9	3.1
10°-20°	493.8	8.8
20°-30°	751.7	13.4
30°-40°	912.8	16.3
40°-50°	964.3	17.2
50°-60°	909.9	16.3
60°-70°	756.6	13.5
70°-80°	497.7	8.9
80°-90°	135.7	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°	1417.4	25.3
0°-40°	2330.2	41.7
0°-60°	4204.5	75.2
0°-90°	5594.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5594.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1815	1815	1815	1815	1815	
5°	1811	1811	1803	1811	1811	172
15°	1740	1742	1745	1761	1761	491
25°	1602	1611	1626	1654	1658	739
35°	1408	1424	1457	1494	1506	881
45°	1166	1190	1248	1309	1333	898
55°	883	920	1019	1115	1150	787
65°	567	632	780	895	935	560
75°	246	358	520	616	630	265
85°	47	103	126	141	143	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1815.1	1815.1	1815.1	1815.1	1815.1
2.5°	1817.5	1815.1	1805.7	1815.1	1815.1
5°	1810.6	1810.6	1803.3	1810.6	1810.6
7.5°	1798.8	1798.8	1794.0	1803.3	1803.3
10°	1784.6	1784.6	1782.4	1794.0	1794.0
12.5°	1763.7	1765.8	1763.7	1777.6	1777.6
15°	1740.1	1742.5	1744.9	1761.3	1761.3
17.5°	1709.8	1714.4	1719.2	1737.7	1740.1
20°	1681.7	1683.9	1693.2	1714.4	1716.8
22.5°	1644.2	1651.2	1663.0	1683.9	1691.1
25°	1601.9	1611.3	1625.5	1653.6	1658.1
27.5°	1562.2	1569.2	1588.0	1618.5	1627.9
30°	1513.0	1524.7	1548.1	1578.6	1590.4
32.5°	1466.1	1477.9	1506.0	1538.7	1548.1
35°	1407.7	1424.0	1456.7	1494.2	1506.0
37.5°	1351.4	1367.8	1407.7	1449.7	1463.9
40°	1292.8	1311.5	1353.8	1402.9	1421.6
42.5°	1229.5	1255.3	1302.1	1356.0	1377.1
45°	1166.3	1189.9	1248.3	1309.1	1332.7
47.5°	1098.5	1126.7	1189.9	1262.5	1290.6
50°	1025.9	1061.0	1133.6	1213.2	1243.7
52.5°	953.4	993.0	1075.0	1163.9	1196.9
55°	882.9	920.4	1018.7	1114.9	1150.0
57.5°	805.8	852.6	960.3	1063.2	1098.5
60°	726.0	777.6	901.7	1009.4	1046.9
62.5°	646.4	705.0	845.4	953.4	993.0
65°	566.8	632.4	780.0	894.7	934.6
67.5°	489.4	562.0	719.0	833.9	873.5
70°	400.5	491.8	653.4	765.9	805.8
72.5°	318.5	424.0	590.1	695.7	730.8
75°	245.9	358.4	519.9	615.9	630.0
77.5°	180.3	292.8	447.3	480.0	482.4
80°	121.9	234.1	342.1	337.3	342.1
82.5°	79.6	175.7	215.4	241.3	243.5
85°	46.9	103.1	126.4	140.6	142.8
87.5°	23.3	35.1	44.5	46.9	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)