

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: P474084

Luminaire Tested: **24CZ2-40VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474084
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40VHE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4209.5 lumens
Efficiency: N/A
Efficacy: 154.2 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

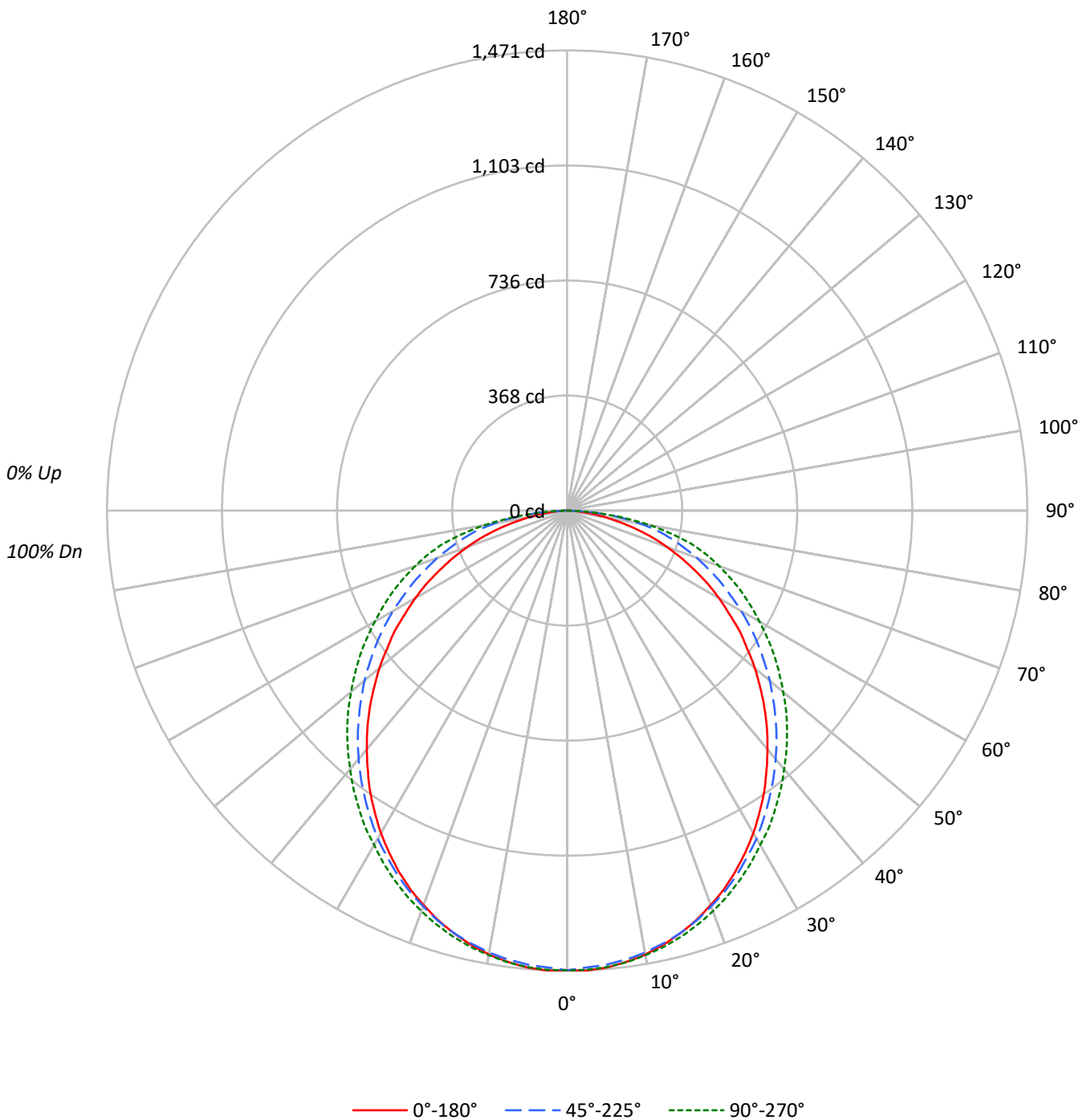
Input Watts (W): 27.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1977	1977	1977
5°	1980	1968	1978
10°	1969	1960	1971
15°	1948	1947	1964
20°	1922	1928	1951
25°	1890	1906	1936
30°	1850	1882	1917
35°	1804	1849	1907
40°	1750	1822	1896
45°	1697	1793	1892
50°	1640	1769	1887
55°	1582	1747	1898
60°	1509	1730	1911
65°	1429	1724	1957
70°	1333	1733	2026
75°	1186	1783	2135
80°	970	1822	2084
85°	684	1590	1623



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.9	3.3
10°-20°	395.6	9.4
20°-30°	593.0	14.1
30°-40°	706.3	16.8
40°-50°	728.3	17.3
50°-60°	664.6	15.8
60°-70°	531.4	12.6
70°-80°	347.1	8.2
80°-90°	104.2	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°	1127.6	26.8
0°-40°	1833.9	43.6
0°-60°	3226.8	76.7
0°-90°	4209.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4209.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1469	1469	1469	1469	1469	
5°	1466	1463	1457	1466	1464	139
15°	1399	1400	1398	1410	1410	394
25°	1273	1275	1284	1303	1304	586
35°	1098	1106	1126	1154	1161	686
45°	892	908	942	982	994	688
55°	674	694	745	794	809	600
65°	449	479	541	595	615	445
75°	228	266	343	398	411	242
85°	44	80	103	105	105	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1469.3	1469.3	1469.3	1469.3	1469.3
2.5°	1471.4	1469.3	1461.7	1470.7	1469.3
5°	1465.9	1463.1	1456.9	1465.9	1464.5
7.5°	1454.8	1453.4	1447.2	1457.6	1456.2
10°	1441.0	1439.6	1434.7	1445.1	1443.0
12.5°	1421.6	1420.9	1417.5	1429.9	1428.5
15°	1398.8	1399.5	1398.1	1409.8	1409.8
17.5°	1372.5	1371.8	1374.6	1389.1	1387.7
20°	1342.1	1342.8	1346.2	1362.8	1362.8
22.5°	1310.3	1309.6	1317.2	1333.8	1335.2
25°	1272.9	1275.0	1284.0	1302.7	1304.1
27.5°	1232.8	1236.3	1247.4	1268.8	1270.9
30°	1190.7	1194.8	1211.4	1231.5	1234.2
32.5°	1144.3	1153.3	1168.5	1194.1	1201.0
35°	1098.0	1105.6	1125.7	1154.0	1160.9
37.5°	1046.8	1059.3	1082.1	1113.2	1122.2
40°	996.4	1008.8	1037.2	1069.7	1079.3
42.5°	945.2	958.3	990.8	1027.5	1037.9
45°	892.0	907.9	942.4	981.8	994.3
47.5°	837.3	856.0	893.3	936.2	950.0
50°	783.4	802.1	844.9	889.2	901.6
52.5°	725.3	748.8	794.5	842.2	854.6
55°	674.2	693.5	744.7	793.8	809.0
57.5°	614.0	640.3	694.9	744.7	759.2
60°	560.8	585.0	643.0	693.5	710.1
62.5°	506.8	531.7	589.8	647.2	662.4
65°	448.7	479.2	541.4	594.6	614.7
67.5°	393.4	425.2	488.8	545.5	566.3
70°	338.8	371.3	440.4	498.5	515.1
72.5°	284.9	318.8	390.7	447.4	466.7
75°	228.2	266.2	343.0	398.3	410.7
77.5°	174.9	217.1	294.6	331.9	340.9
80°	125.2	171.5	235.1	262.1	269.0
82.5°	82.3	127.2	175.6	190.1	188.1
85°	44.3	79.5	103.0	105.1	105.1
87.5°	17.3	31.8	32.5	24.9	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)