

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: SHAPER

Report Number: P241262

Luminaire Tested: **1800-X-90-L40-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241262
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25346)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 1800-X-90-L40-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

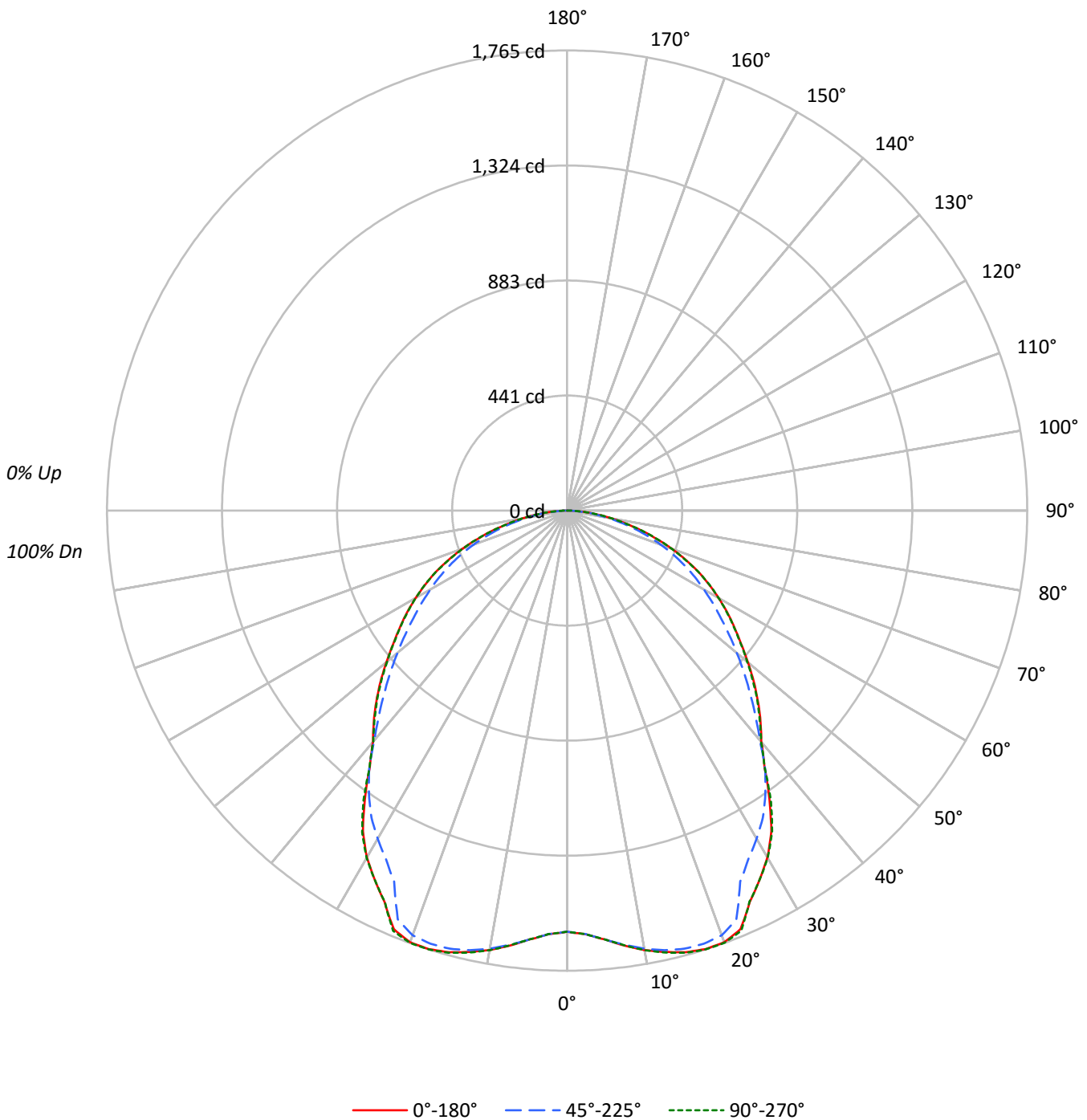
Lumens per Lamp: N/A
Luminaire Lumens: 4631.4 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.17' x H: 0')
CIE Type: Direct

Input Watts (W): 53.9
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16267	16267	16267
5°	16692	16692	16686
10°	17502	17444	17502
15°	18278	18135	18302
20°	18879	18575	18904
25°	18411	17443	18391
30°	17863	16897	17883
35°	16632	16295	16750
40°	15233	15120	15210
45°	14742	14134	14694
50°	14175	13318	14122
55°	13756	12646	13726
60°	13509	12202	13509
65°	13228	11832	13187
70°	12556	11249	12541
75°	11430	10344	11477
80°	10002	9080	10037
85°	8688	7567	8688



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.5	3.4
10°-20°	494.5	10.7
20°-30°	747.7	16.1
30°-40°	816.2	17.6
40°-50°	801.3	17.3
50°-60°	701.5	15.1
60°-70°	527.1	11.4
70°-80°	301.4	6.5
80°-90°	82.2	1.8
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°	1401.7	30.3
0°-40°	2218.0	47.9
0°-60°	3720.7	80.3
0°-90°	4631.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4631.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1616	1616	1616	1616	1616	
5°	1652	1652	1652	1651	1651	160
15°	1753	1752	1740	1753	1756	496
25°	1657	1659	1570	1659	1655	765
35°	1353	1287	1326	1282	1363	844
45°	1035	1056	993	1050	1032	798
55°	784	796	720	793	782	703
65°	555	534	497	533	554	546
75°	294	282	266	283	295	312
85°	75	71	66	71	75	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6
2.5°	1626.4	1625.3	1625.8	1625.3	1626.4	1626.4	1625.8	1626.4	1625.8	1625.8	1625.8
5°	1651.5	1650.3	1650.9	1649.8	1651.5	1652.0	1651.5	1652.0	1652.0	1651.5	1651.5
7.5°	1682.8	1680.5	1681.1	1679.9	1681.6	1681.6	1681.1	1681.1	1680.5	1679.9	1680.5
10°	1711.8	1710.7	1710.7	1710.1	1711.3	1710.7	1709.5	1709.0	1706.7	1706.1	1707.3
12.5°	1734.0	1735.2	1736.9	1736.9	1736.3	1735.7	1732.9	1731.2	1727.8	1727.2	1728.3
15°	1753.4	1754.0	1755.7	1755.1	1753.4	1750.6	1747.7	1744.3	1741.4	1739.7	1741.4
17.5°	1763.6	1763.6	1763.1	1761.4	1758.0	1754.5	1750.6	1747.1	1744.3	1742.0	1744.3
20°	1761.9	1761.9	1759.1	1755.7	1750.0	1744.9	1740.9	1737.5	1734.6	1733.5	1735.2
22.5°	1738.0	1739.7	1737.5	1736.9	1732.3	1725.5	1717.5	1709.0	1699.9	1697.0	1701.0
25°	1657.2	1656.0	1657.2	1668.0	1670.8	1648.0	1619.0	1592.2	1576.3	1570.0	1578.6
27.5°	1597.4	1596.2	1582.0	1559.2	1527.9	1513.1	1515.4	1513.1	1509.1	1506.2	1510.2
30°	1536.4	1527.9	1489.2	1447.6	1417.4	1412.9	1426.0	1442.5	1452.7	1453.3	1451.6
32.5°	1457.8	1440.8	1390.6	1358.8	1346.2	1343.9	1347.9	1365.0	1388.4	1397.5	1385.5
35°	1353.1	1343.4	1312.6	1292.1	1288.1	1285.3	1278.5	1287.0	1316.0	1325.7	1314.9
37.5°	1244.3	1253.4	1240.3	1232.9	1232.3	1226.6	1217.0	1218.1	1233.5	1247.1	1231.8
40°	1158.9	1168.0	1176.5	1176.0	1173.7	1165.1	1157.7	1153.7	1152.6	1150.3	1153.7
42.5°	1097.9	1094.5	1111.0	1120.1	1114.5	1108.8	1102.5	1099.6	1078.6	1068.9	1081.4
45°	1035.3	1034.2	1045.5	1064.9	1060.4	1052.4	1050.7	1039.3	1003.4	992.6	1006.3
47.5°	970.9	975.5	985.8	1001.7	1004.5	997.7	992.6	969.2	932.8	919.7	932.2
50°	904.9	915.1	929.4	935.6	938.5	934.5	931.1	900.9	863.9	850.2	864.5
52.5°	841.7	855.9	874.7	869.6	867.3	869.0	863.3	836.0	800.1	783.6	800.7
55°	783.6	797.3	813.8	803.5	792.7	799.0	793.8	772.2	740.9	720.4	739.7
57.5°	728.9	737.5	750.6	736.9	724.4	731.8	726.6	709.6	680.5	662.9	681.7
60°	670.8	677.7	685.1	672.0	658.9	662.9	660.6	645.2	621.3	605.9	620.2
62.5°	612.7	616.2	621.3	607.1	596.2	596.2	595.1	580.3	561.5	553.0	560.9
65°	555.2	554.7	556.4	542.1	534.2	533.0	530.7	517.1	502.3	496.6	502.8
67.5°	490.3	491.5	492.0	478.9	472.7	469.8	468.1	455.6	443.6	439.6	444.2
70°	426.5	427.1	427.1	415.1	410.6	406.0	404.3	394.6	385.0	382.1	386.1
72.5°	359.3	363.3	361.6	351.9	348.5	342.8	341.7	335.4	328.0	324.0	328.0
75°	293.8	299.5	297.8	289.3	285.3	279.6	280.2	276.8	268.8	265.9	269.9
77.5°	230.6	234.1	234.6	230.1	223.8	219.8	221.5	221.0	215.3	208.4	213.6
80°	172.5	176.5	177.1	173.1	168.0	164.6	166.9	166.9	162.3	156.6	161.2
82.5°	120.2	123.0	123.0	120.7	118.4	115.0	116.2	116.7	113.9	108.2	112.2
85°	75.2	75.7	74.6	72.9	71.2	70.0	70.0	71.2	68.9	65.5	68.3
87.5°	27.9	28.5	27.9	29.6	27.9	27.3	27.9	29.6	27.3	27.3	27.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6	1615.6
2.5°	1625.8	1626.4	1626.4	1625.8	1625.8	1625.8	1625.3	1625.8
5°	1651.5	1652.0	1652.0	1650.9	1651.5	1650.9	1650.3	1650.9
7.5°	1681.1	1682.2	1681.6	1682.2	1682.8	1681.6	1681.6	1681.6
10°	1708.4	1710.1	1711.3	1712.4	1713.0	1711.8	1712.4	1711.8
12.5°	1730.6	1734.0	1736.3	1737.5	1738.6	1738.6	1737.5	1736.3
15°	1744.3	1748.3	1751.1	1754.5	1756.8	1757.4	1756.2	1755.7
17.5°	1747.7	1751.1	1755.1	1758.5	1761.9	1764.2	1765.4	1764.8
20°	1738.0	1740.9	1745.4	1750.6	1755.1	1759.7	1763.1	1764.2
22.5°	1710.1	1718.1	1726.6	1732.9	1736.9	1739.2	1740.9	1744.9
25°	1595.7	1616.7	1647.5	1670.8	1666.8	1656.0	1652.0	1655.4
27.5°	1514.2	1511.9	1508.5	1526.7	1555.2	1580.3	1592.2	1597.9
30°	1441.3	1424.2	1408.3	1414.6	1443.6	1486.9	1523.3	1538.1
32.5°	1365.0	1341.7	1339.4	1343.4	1357.0	1386.1	1435.6	1463.5
35°	1284.7	1272.2	1279.0	1284.2	1288.7	1303.5	1337.7	1362.7
37.5°	1213.0	1210.7	1219.8	1226.1	1228.3	1235.7	1248.8	1245.4
40°	1149.8	1151.5	1159.4	1166.3	1170.8	1171.4	1163.4	1157.2
42.5°	1092.8	1100.2	1100.2	1108.8	1116.7	1105.9	1089.4	1094.0
45°	1034.7	1046.7	1046.1	1053.5	1060.9	1042.1	1028.5	1031.9
47.5°	966.4	989.2	992.6	1000.6	1000.6	981.2	970.4	966.4
50°	896.9	926.5	930.5	935.1	932.8	925.4	911.2	901.5
52.5°	832.6	860.5	864.5	862.7	867.3	870.7	851.4	839.4
55°	769.4	791.0	796.1	790.4	801.2	810.9	792.7	781.9
57.5°	706.7	723.2	727.8	723.2	735.2	746.0	734.0	726.6
60°	643.5	658.3	661.2	657.2	671.4	681.1	675.4	670.8
62.5°	581.4	591.7	594.5	596.2	604.8	616.2	615.0	614.5
65°	518.8	529.6	530.7	535.9	541.6	556.4	553.5	553.5
67.5°	457.9	465.3	467.0	474.9	477.2	491.5	489.7	487.5
70°	394.6	402.0	404.3	412.3	415.7	427.1	427.7	426.0
72.5°	336.6	339.4	341.7	349.1	351.9	362.8	362.8	360.5
75°	277.3	276.8	279.0	286.4	289.3	298.4	297.8	295.0
77.5°	221.5	218.7	220.4	225.5	228.9	235.8	233.5	231.2
80°	169.1	164.6	165.1	170.3	172.5	177.1	174.8	173.1
82.5°	119.6	115.6	114.5	118.4	121.9	122.4	121.9	120.7
85°	72.9	69.5	70.0	71.8	74.0	74.0	75.2	75.2
87.5°	28.5	26.8	26.8	28.5	28.5	29.0	28.5	27.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)