

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: P241230

Luminaire Tested: **1800-X-80-L40-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241230
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-80-L40-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

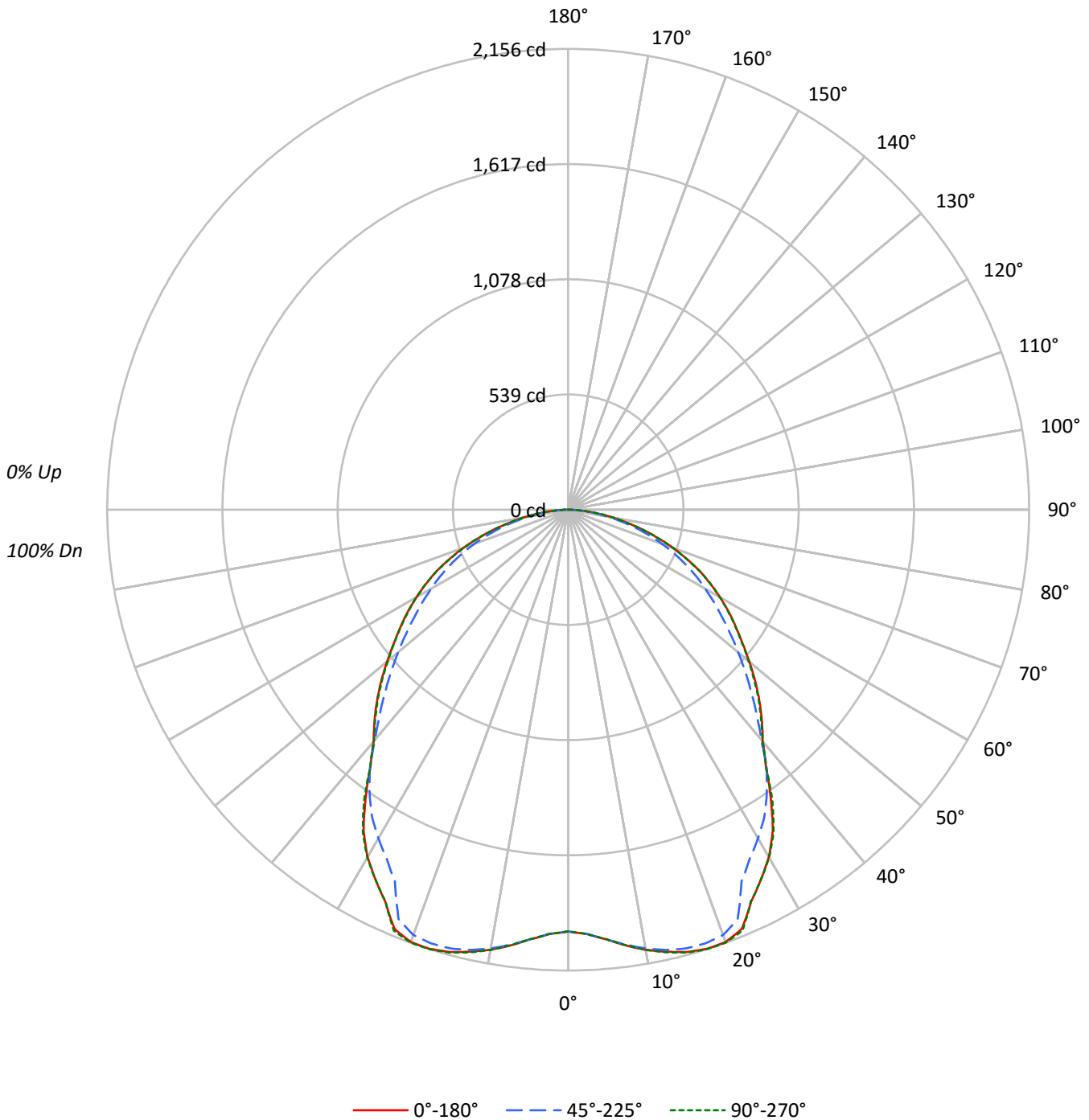
Lumens per Lamp: N/A
Luminaire Lumens: 5657.6 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.17' x H: 0')
CIE Type: Direct

Input Watts (W): 53.9
Input Voltage (V): 120
Input Current (A_{in}): 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°	19872	19872	19872
5°	20391	20391	20384
10°	21380	21310	21380
15°	22328	22154	22357
20°	23062	22691	23092
25°	22490	21308	22466
30°	21822	20641	21845
35°	20317	19907	20462
40°	18607	18470	18581
45°	18009	17266	17949
50°	17316	16269	17250
55°	16803	15448	16767
60°	16503	14906	16503
65°	16161	14452	16111
70°	15338	13742	15318
75°	13966	12640	14017
80°	12223	11093	12264
85°	10606	9242	10606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	3.4
10°-20°	604.0	10.7
20°-30°	913.4	16.1
30°-40°	997.1	17.6
40°-50°	978.8	17.3
50°-60°	856.9	15.1
60°-70°	643.9	11.4
70°-80°	368.1	6.5
80°-90°	100.4	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°	1712.3	30.3
0°-40°	2709.4	47.9
0°-60°	4545.1	80.3
0°-90°	5657.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5657.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1974	1974	1974	1974	1974	
5°	2017	2018	2017	2017	2017	195
15°	2142	2140	2125	2141	2145	606
25°	2024	2027	1918	2027	2022	935
35°	1653	1572	1620	1566	1665	1031
45°	1265	1290	1212	1282	1260	975
55°	957	972	880	969	955	858
65°	678	652	607	651	676	667
75°	359	345	325	345	360	381
85°	92	86	80	87	92	103
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°	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6
2.5°	1986.8	1985.4	1986.1	1985.4	1986.8	1986.8	1986.1	1986.8	1986.1	1986.1	1986.1
5°	2017.4	2016.0	2016.7	2015.3	2017.4	2018.1	2017.4	2018.1	2018.1	2017.4	2017.4
7.5°	2055.6	2052.9	2053.6	2052.2	2054.2	2054.2	2053.6	2053.6	2052.9	2052.2	2052.9
10°	2091.1	2089.7	2089.7	2089.0	2090.4	2089.7	2088.3	2087.6	2084.9	2084.2	2085.6
12.5°	2118.2	2119.6	2121.7	2121.7	2121.0	2120.3	2116.9	2114.8	2110.6	2109.9	2111.3
15°	2141.9	2142.6	2144.7	2144.0	2141.9	2138.4	2134.9	2130.8	2127.3	2125.2	2127.3
17.5°	2154.4	2154.4	2153.7	2151.6	2147.5	2143.3	2138.4	2134.2	2130.8	2128.0	2130.8
20°	2152.3	2152.3	2148.9	2144.7	2137.7	2131.5	2126.6	2122.4	2118.9	2117.6	2119.6
22.5°	2123.1	2125.2	2122.4	2121.7	2116.2	2107.8	2098.1	2087.6	2076.5	2073.0	2077.9
25°	2024.3	2022.9	2024.3	2037.6	2041.0	2013.2	1977.7	1945.0	1925.6	1917.9	1928.3
27.5°	1951.3	1949.9	1932.5	1904.7	1866.4	1848.3	1851.1	1848.3	1843.5	1840.0	1844.9
30°	1876.9	1866.4	1819.1	1768.3	1731.5	1725.9	1741.9	1762.1	1774.6	1775.3	1773.2
32.5°	1780.9	1760.0	1698.8	1659.8	1644.5	1641.7	1646.6	1667.5	1696.0	1707.1	1692.5
35°	1652.9	1641.0	1603.5	1578.4	1573.6	1570.1	1561.7	1572.2	1607.6	1619.5	1606.3
37.5°	1520.0	1531.1	1515.1	1506.1	1505.4	1498.4	1486.6	1488.0	1506.8	1523.5	1504.7
40°	1415.6	1426.8	1437.2	1436.5	1433.7	1423.3	1414.3	1409.4	1408.0	1405.2	1409.4
42.5°	1341.2	1337.0	1357.2	1368.3	1361.4	1354.4	1346.8	1343.3	1317.6	1305.7	1321.0
45°	1264.7	1263.3	1277.2	1300.9	1295.3	1285.6	1283.5	1269.6	1225.7	1212.5	1229.2
47.5°	1186.1	1191.6	1204.2	1223.6	1227.1	1218.8	1212.5	1184.0	1139.5	1123.5	1138.8
50°	1105.4	1117.9	1135.3	1142.9	1146.4	1141.6	1137.4	1100.5	1055.3	1038.6	1056.0
52.5°	1028.2	1045.6	1068.5	1062.3	1059.5	1061.6	1054.6	1021.2	977.4	957.2	978.1
55°	957.2	973.9	994.1	981.6	968.3	976.0	969.7	943.3	905.0	880.0	903.6
57.5°	890.4	900.9	916.9	900.2	884.9	893.9	887.6	866.8	831.3	809.7	832.7
60°	819.5	827.8	836.9	820.9	804.9	809.7	807.0	788.2	759.0	740.2	757.6
62.5°	748.5	752.7	759.0	741.6	728.3	728.3	727.0	708.9	685.9	675.5	685.2
65°	678.3	677.6	679.6	662.3	652.5	651.1	648.3	631.6	613.6	606.6	614.3
67.5°	599.0	600.3	601.0	585.0	577.4	573.9	571.8	556.5	541.9	537.0	542.6
70°	521.0	521.7	521.7	507.1	501.6	496.0	493.9	482.1	470.3	466.8	471.6
72.5°	439.0	443.8	441.7	429.9	425.7	418.8	417.4	409.7	400.7	395.8	400.7
75°	359.0	365.9	363.8	353.4	348.5	341.6	342.3	338.1	328.3	324.9	329.7
77.5°	281.7	285.9	286.6	281.0	273.4	268.5	270.6	269.9	263.0	254.6	260.9
80°	210.8	215.7	216.3	211.5	205.2	201.0	203.8	203.8	198.3	191.3	196.9
82.5°	146.8	150.3	150.3	147.5	144.7	140.5	141.9	142.6	139.1	132.2	137.0
85°	91.8	92.5	91.1	89.0	87.0	85.6	85.6	87.0	84.2	80.0	83.5
87.5°	34.1	34.8	34.1	36.2	34.1	33.4	34.1	36.2	33.4	33.4	34.1
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°	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6	1973.6
2.5°	1986.1	1986.8	1986.8	1986.1	1986.1	1986.1	1985.4	1986.1
5°	2017.4	2018.1	2018.1	2016.7	2017.4	2016.7	2016.0	2016.7
7.5°	2053.6	2054.9	2054.2	2054.9	2055.6	2054.2	2054.2	2054.2
10°	2086.9	2089.0	2090.4	2091.8	2092.5	2091.1	2091.8	2091.1
12.5°	2114.1	2118.2	2121.0	2122.4	2123.8	2123.8	2122.4	2121.0
15°	2130.8	2135.6	2139.1	2143.3	2146.1	2146.8	2145.4	2144.7
17.5°	2134.9	2139.1	2144.0	2148.2	2152.3	2155.1	2156.5	2155.8
20°	2123.1	2126.6	2132.2	2138.4	2144.0	2149.6	2153.7	2155.1
22.5°	2089.0	2098.8	2109.2	2116.9	2121.7	2124.5	2126.6	2131.5
25°	1949.2	1974.9	2012.5	2041.0	2036.2	2022.9	2018.1	2022.2
27.5°	1849.7	1846.9	1842.8	1865.0	1899.8	1930.4	1945.0	1952.0
30°	1760.7	1739.8	1720.3	1728.0	1763.5	1816.3	1860.9	1878.9
32.5°	1667.5	1638.9	1636.2	1641.0	1657.7	1693.2	1753.7	1787.8
35°	1569.4	1554.1	1562.4	1568.7	1574.3	1592.3	1634.1	1664.7
37.5°	1481.7	1478.9	1490.1	1497.7	1500.5	1509.6	1525.6	1521.4
40°	1404.5	1406.6	1416.3	1424.7	1430.3	1430.9	1421.2	1413.6
42.5°	1334.9	1344.0	1344.0	1354.4	1364.2	1350.9	1330.8	1336.3
45°	1264.0	1278.6	1277.9	1286.9	1296.0	1273.0	1256.3	1260.5
47.5°	1180.5	1208.3	1212.5	1222.3	1222.3	1198.6	1185.4	1180.5
50°	1095.6	1131.8	1136.7	1142.3	1139.5	1130.4	1113.0	1101.2
52.5°	1017.0	1051.1	1056.0	1053.9	1059.5	1063.6	1040.0	1025.4
55°	939.8	966.3	972.5	965.6	978.8	990.6	968.3	955.1
57.5°	863.3	883.5	889.0	883.5	898.1	911.3	896.7	887.6
60°	786.1	804.2	807.6	802.8	820.2	832.0	825.0	819.5
62.5°	710.3	722.8	726.3	728.3	738.8	752.7	751.3	750.6
65°	633.7	647.0	648.3	654.6	661.6	679.6	676.2	676.2
67.5°	559.3	568.3	570.4	580.2	583.0	600.3	598.3	595.5
70°	482.1	491.1	493.9	503.6	507.8	521.7	522.4	520.3
72.5°	411.1	414.6	417.4	426.4	429.9	443.1	443.1	440.3
75°	338.8	338.1	340.9	349.9	353.4	364.5	363.8	360.3
77.5°	270.6	267.1	269.2	275.5	279.7	288.0	285.2	282.4
80°	206.6	201.0	201.7	208.0	210.8	216.3	213.6	211.5
82.5°	146.1	141.2	139.8	144.7	148.9	149.6	148.9	147.5
85°	89.0	84.9	85.6	87.7	90.4	90.4	91.8	91.8
87.5°	34.8	32.7	32.7	34.8	34.8	35.5	34.8	33.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)