

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: P241266

Luminaire Tested: **1800-X-90-L30-3-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241266
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-L30-3-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

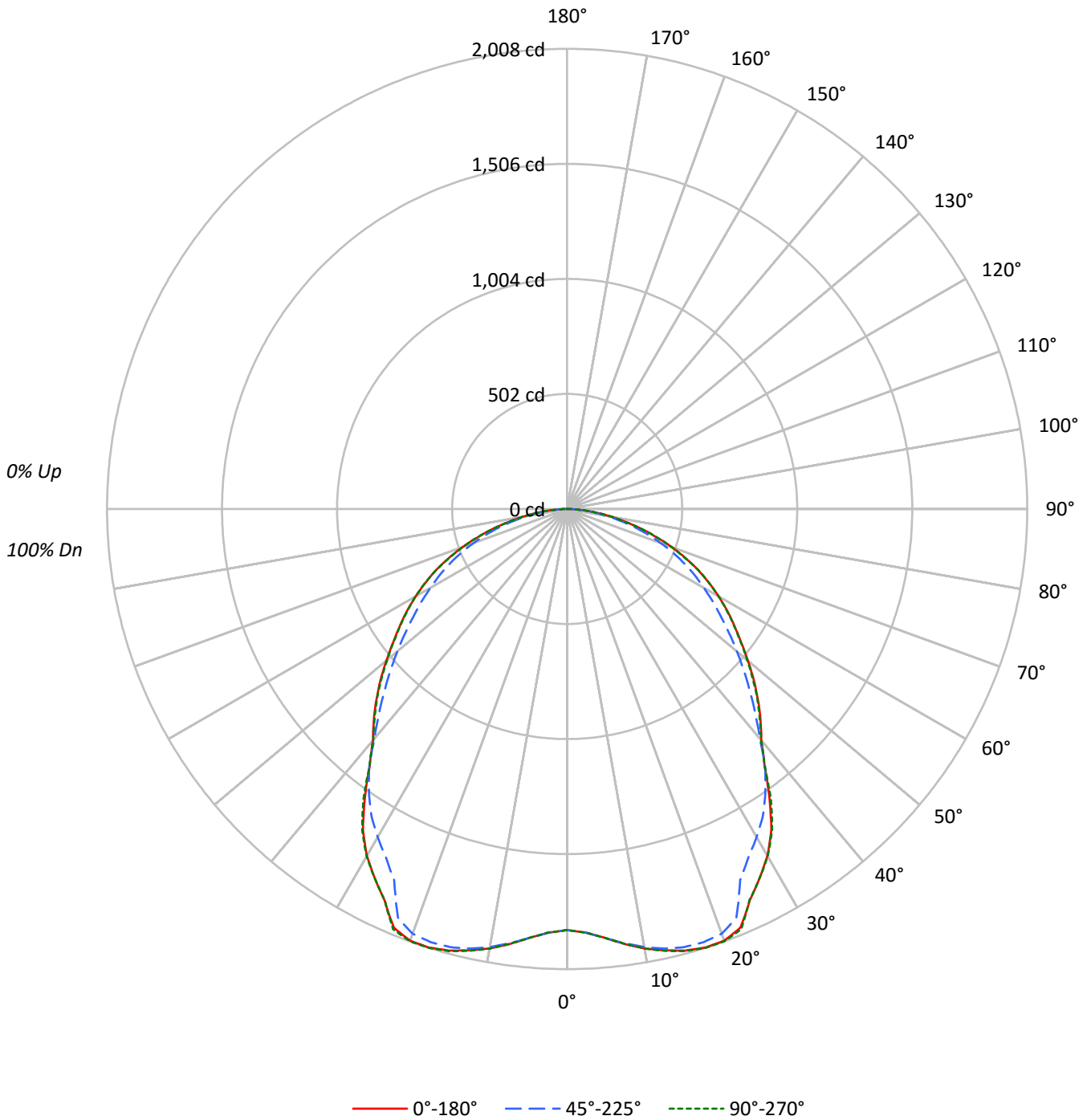
Lumens per Lamp: N/A
Luminaire Lumens: 5268.6 lumens
Efficiency: N/A
Efficacy: 74.6 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.17' x H: 0')
CIE Type: Direct

Input Watts (W): 70.6
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°	18506	18506	18506
5°	18989	18989	18982
10°	19911	19844	19911
15°	20793	20631	20819
20°	21478	21130	21505
25°	20944	19843	20922
30°	20321	19222	20344
35°	18920	18538	19055
40°	17328	17200	17303
45°	16770	16079	16716
50°	16125	15151	16064
55°	15648	14386	15615
60°	15367	13881	15367
65°	15048	13459	15003
70°	14284	12797	14267
75°	13005	11768	13056
80°	11382	10333	11417
85°	9878	8607	9878



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	3.4
10°-20°	562.5	10.7
20°-30°	850.6	16.1
30°-40°	928.6	17.6
40°-50°	911.5	17.3
50°-60°	798.0	15.1
60°-70°	599.6	11.4
70°-80°	342.8	6.5
80°-90°	93.5	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°	1594.6	30.3
0°-40°	2523.2	47.9
0°-60°	4232.7	80.3
0°-90°	5268.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5268.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1838	1838	1838	1838	1838	
5°	1879	1879	1879	1879	1878	182
15°	1995	1993	1979	1994	1997	564
25°	1885	1888	1786	1887	1883	870
35°	1539	1464	1508	1458	1550	960
45°	1178	1202	1129	1194	1174	908
55°	891	905	820	902	890	799
65°	632	607	565	607	630	621
75°	334	321	302	322	336	355
85°	86	80	74	81	86	96
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°	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9
2.5°	1850.2	1848.9	1849.5	1848.9	1850.2	1850.2	1849.5	1850.2	1849.5	1849.5	1849.5
5°	1878.7	1877.4	1878.0	1876.8	1878.7	1879.3	1878.7	1879.3	1879.3	1878.7	1878.7
7.5°	1914.3	1911.7	1912.4	1911.1	1913.0	1913.0	1912.4	1912.4	1911.7	1911.1	1911.7
10°	1947.4	1946.1	1946.1	1945.4	1946.7	1946.1	1944.8	1944.1	1941.5	1940.9	1942.2
12.5°	1972.6	1973.9	1975.9	1975.9	1975.2	1974.6	1971.3	1969.4	1965.5	1964.9	1966.2
15°	1994.7	1995.3	1997.2	1996.6	1994.7	1991.4	1988.2	1984.3	1981.1	1979.1	1981.1
17.5°	2006.3	2006.3	2005.7	2003.7	1999.8	1996.0	1991.4	1987.5	1984.3	1981.7	1984.3
20°	2004.4	2004.4	2001.1	1997.2	1990.8	1984.9	1980.4	1976.5	1973.3	1972.0	1973.9
22.5°	1977.2	1979.1	1976.5	1975.9	1970.7	1962.9	1953.8	1944.1	1933.8	1930.5	1935.1
25°	1885.2	1883.9	1885.2	1897.5	1900.7	1874.8	1841.8	1811.3	1793.2	1786.1	1795.8
27.5°	1817.2	1815.9	1799.7	1773.7	1738.1	1721.3	1723.9	1721.3	1716.7	1713.5	1718.0
30°	1747.8	1738.1	1694.1	1646.8	1612.4	1607.3	1622.2	1640.9	1652.6	1653.3	1651.3
32.5°	1658.4	1639.0	1582.0	1545.7	1531.5	1528.9	1533.4	1552.8	1579.4	1589.8	1576.2
35°	1539.2	1528.2	1493.2	1469.9	1465.4	1462.1	1454.4	1464.1	1497.1	1508.1	1495.8
37.5°	1415.5	1425.9	1411.0	1402.5	1401.9	1395.4	1384.4	1385.7	1403.2	1418.7	1401.2
40°	1318.3	1328.7	1338.4	1337.8	1335.2	1325.5	1317.0	1312.5	1311.2	1308.6	1312.5
42.5°	1249.0	1245.1	1263.9	1274.3	1267.8	1261.3	1254.2	1251.0	1227.0	1216.0	1230.2
45°	1177.7	1176.5	1189.4	1211.4	1206.3	1197.2	1195.2	1182.3	1141.5	1129.2	1144.7
47.5°	1104.5	1109.7	1121.4	1139.5	1142.8	1135.0	1129.2	1102.6	1061.1	1046.2	1060.5
50°	1029.4	1041.1	1057.3	1064.4	1067.6	1063.1	1059.2	1024.9	982.8	967.2	983.4
52.5°	957.5	973.7	995.1	989.2	986.6	988.6	982.1	951.0	910.2	891.4	910.8
55°	891.4	907.0	925.7	914.1	901.8	908.9	903.1	878.5	842.8	819.5	841.5
57.5°	829.2	838.9	853.8	838.3	824.0	832.5	826.6	807.2	774.2	754.1	775.4
60°	763.1	770.9	779.3	764.4	749.5	754.1	751.5	734.0	706.8	689.3	705.5
62.5°	697.1	700.9	706.8	690.6	678.3	678.3	677.0	660.1	638.8	629.0	638.1
65°	631.6	631.0	632.9	616.7	607.7	606.4	603.8	588.2	571.4	564.9	572.0
67.5°	557.8	559.1	559.7	544.8	537.7	534.5	532.5	518.3	504.7	500.1	505.3
70°	485.2	485.9	485.9	472.3	467.1	461.9	460.0	448.9	437.9	434.7	439.2
72.5°	408.8	413.3	411.4	400.4	396.5	390.0	388.7	381.6	373.1	368.6	373.1
75°	334.3	340.8	338.8	329.1	324.6	318.1	318.7	314.8	305.8	302.5	307.1
77.5°	262.4	266.3	266.9	261.7	254.6	250.1	252.0	251.4	244.9	237.1	242.9
80°	196.3	200.8	201.5	196.9	191.1	187.2	189.8	189.8	184.6	178.2	183.3
82.5°	136.7	139.9	139.9	137.3	134.7	130.9	132.2	132.8	129.6	123.1	127.6
85°	85.5	86.2	84.9	82.9	81.0	79.7	79.7	81.0	78.4	74.5	77.7
87.5°	31.7	32.4	31.7	33.7	31.7	31.1	31.7	33.7	31.1	31.1	31.7
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°	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9
2.5°	1849.5	1850.2	1850.2	1849.5	1849.5	1849.5	1848.9	1849.5
5°	1878.7	1879.3	1879.3	1878.0	1878.7	1878.0	1877.4	1878.0
7.5°	1912.4	1913.7	1913.0	1913.7	1914.3	1913.0	1913.0	1913.0
10°	1943.5	1945.4	1946.7	1948.0	1948.7	1947.4	1948.0	1947.4
12.5°	1968.7	1972.6	1975.2	1976.5	1977.8	1977.8	1976.5	1975.2
15°	1984.3	1988.8	1992.1	1996.0	1998.5	1999.2	1997.9	1997.2
17.5°	1988.2	1992.1	1996.6	2000.5	2004.4	2007.0	2008.3	2007.6
20°	1977.2	1980.4	1985.6	1991.4	1996.6	2001.8	2005.7	2007.0
22.5°	1945.4	1954.5	1964.2	1971.3	1975.9	1978.5	1980.4	1984.9
25°	1815.2	1839.2	1874.2	1900.7	1896.2	1883.9	1879.3	1883.2
27.5°	1722.6	1720.0	1716.1	1736.8	1769.2	1797.7	1811.3	1817.8
30°	1639.6	1620.2	1602.1	1609.2	1642.2	1691.5	1732.9	1749.8
32.5°	1552.8	1526.3	1523.7	1528.2	1543.8	1576.8	1633.2	1664.9
35°	1461.5	1447.2	1455.0	1460.8	1466.0	1482.9	1521.7	1550.2
37.5°	1379.9	1377.3	1387.6	1394.8	1397.4	1405.8	1420.7	1416.8
40°	1308.0	1309.9	1319.0	1326.7	1331.9	1332.6	1323.5	1316.4
42.5°	1243.2	1251.6	1251.6	1261.3	1270.4	1258.1	1239.3	1244.5
45°	1177.1	1190.7	1190.1	1198.5	1206.9	1185.5	1170.0	1173.9
47.5°	1099.4	1125.3	1129.2	1138.2	1138.2	1116.2	1103.9	1099.4
50°	1020.3	1054.0	1058.5	1063.7	1061.1	1052.7	1036.5	1025.5
52.5°	947.1	978.9	983.4	981.5	986.6	990.5	968.5	954.9
55°	875.2	899.8	905.7	899.2	911.5	922.5	901.8	889.5
57.5°	804.0	822.7	827.9	822.7	836.3	848.7	835.0	826.6
60°	732.0	748.9	752.1	747.6	763.8	774.8	768.3	763.1
62.5°	661.4	673.1	676.3	678.3	688.0	700.9	699.7	699.0
65°	590.2	602.5	603.8	609.6	616.1	632.9	629.7	629.7
67.5°	520.9	529.3	531.2	540.3	542.9	559.1	557.1	554.5
70°	448.9	457.4	460.0	469.0	472.9	485.9	486.5	484.6
72.5°	382.9	386.1	388.7	397.1	400.4	412.7	412.7	410.1
75°	315.5	314.8	317.4	325.9	329.1	339.5	338.8	335.6
77.5°	252.0	248.8	250.7	256.5	260.4	268.2	265.6	263.0
80°	192.4	187.2	187.9	193.7	196.3	201.5	198.9	196.9
82.5°	136.0	131.5	130.2	134.7	138.6	139.3	138.6	137.3
85°	82.9	79.0	79.7	81.6	84.2	84.2	85.5	85.5
87.5°	32.4	30.4	30.4	32.4	32.4	33.0	32.4	31.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)