

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: P241274

Luminaire Tested: **1800-X-90-L30-4-M-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241274  
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-L30-4-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: 5880.6 lumens  
Efficiency: N/A  
Efficacy: 70.9 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

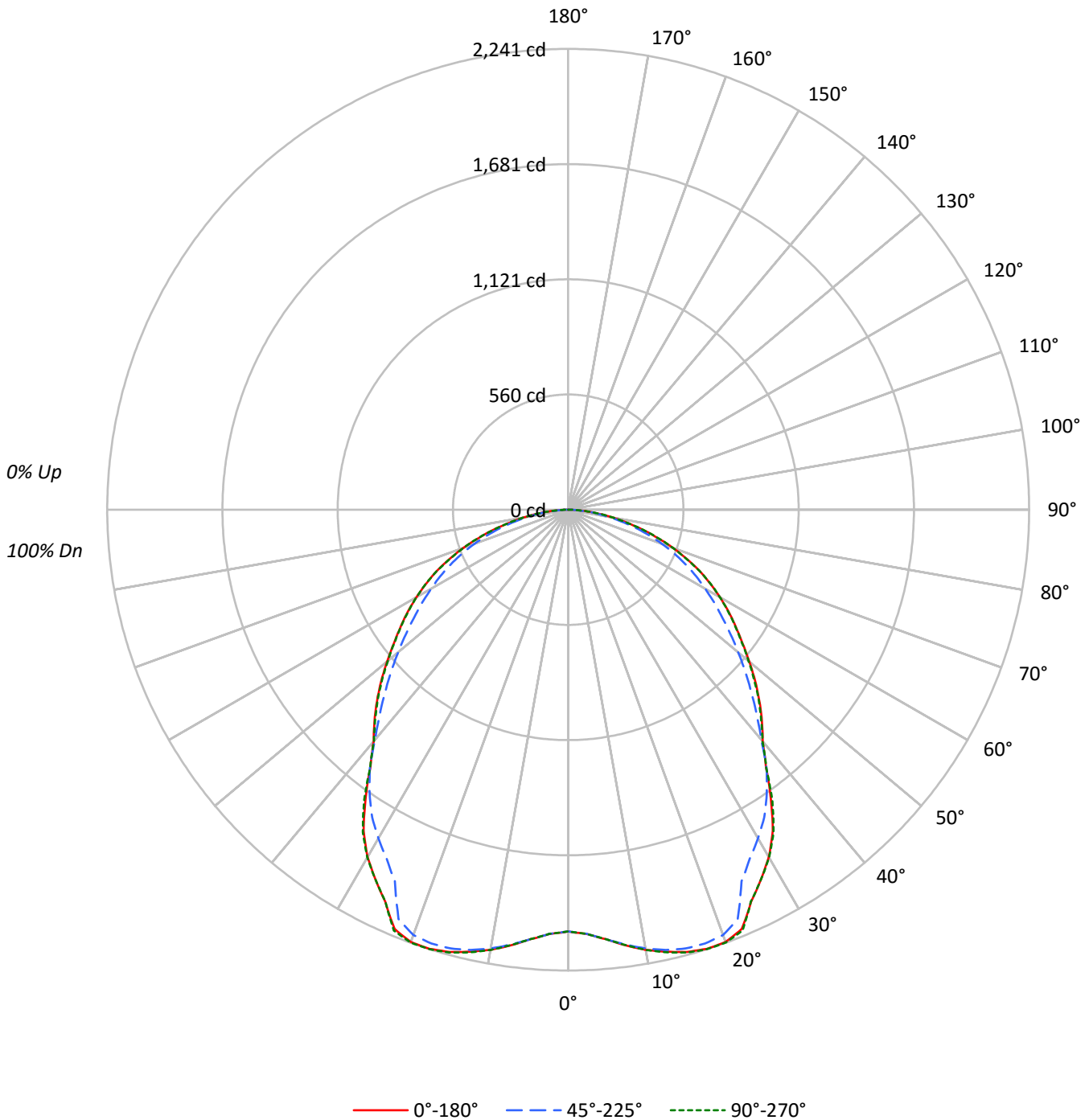
Input Watts (W): 82.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	20655	20655	20655
5°	21194	21194	21187
10°	22223	22149	22223
15°	23207	23027	23238
20°	23972	23584	24003
25°	23376	22148	23353
30°	22681	21455	22707
35°	21118	20691	21269
40°	19340	19198	19313
45°	18718	17946	18657
50°	17999	16910	17930
55°	17465	16057	17428
60°	17154	15492	17154
65°	16797	15022	16744
70°	15945	14284	15924
75°	14515	13138	14573
80°	12705	11527	12745
85°	11021	9612	11021



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.5	3.4
10°-20°	627.8	10.7
20°-30°	949.4	16.1
30°-40°	1036.4	17.6
40°-50°	1017.4	17.3
50°-60°	890.7	15.1
60°-70°	669.3	11.4
70°-80°	382.6	6.5
80°-90°	104.4	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°	1779.8	30.3
0°-40°	2816.2	47.9
0°-60°	4724.3	80.3
0°-90°	5880.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5880.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2051	2051	2051	2051	2051	
5°	2097	2097	2097	2097	2096	203
15°	2226	2224	2209	2226	2229	630
25°	2104	2107	1994	2107	2102	972
35°	1718	1634	1683	1627	1730	1071
45°	1314	1341	1260	1333	1310	1013
55°	995	1010	915	1007	993	892
65°	705	678	630	677	703	693
75°	373	359	338	359	375	396
85°	95	90	83	90	95	107
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°	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3
2.5°	2065.1	2063.6	2064.4	2063.6	2065.1	2065.1	2064.4	2065.1	2064.4	2064.4	2064.4
5°	2096.9	2095.5	2096.2	2094.7	2096.9	2097.6	2096.9	2097.6	2097.6	2096.9	2096.9
7.5°	2136.7	2133.8	2134.5	2133.1	2135.2	2135.2	2134.5	2134.5	2133.8	2133.1	2133.8
10°	2173.5	2172.1	2172.1	2171.4	2172.8	2172.1	2170.7	2169.9	2167.0	2166.3	2167.8
12.5°	2201.7	2203.2	2205.4	2205.4	2204.6	2203.9	2200.3	2198.1	2193.8	2193.1	2194.5
15°	2226.3	2227.1	2229.2	2228.5	2226.3	2222.7	2219.1	2214.8	2211.1	2209.0	2211.1
17.5°	2239.3	2239.3	2238.6	2236.5	2232.1	2227.8	2222.7	2218.4	2214.8	2211.9	2214.8
20°	2237.2	2237.2	2233.6	2229.2	2222.0	2215.5	2210.4	2206.1	2202.5	2201.0	2203.2
22.5°	2206.8	2209.0	2206.1	2205.4	2199.6	2190.9	2180.8	2169.9	2158.4	2154.7	2159.8
25°	2104.1	2102.7	2104.1	2117.9	2121.5	2092.6	2055.7	2021.7	2001.5	1993.5	2004.3
27.5°	2028.2	2026.8	2008.7	1979.8	1940.0	1921.2	1924.1	1921.2	1916.1	1912.5	1917.6
30°	1950.8	1940.0	1890.8	1838.0	1799.7	1793.9	1810.6	1831.5	1844.6	1845.3	1843.1
32.5°	1851.1	1829.4	1765.7	1725.2	1709.3	1706.4	1711.5	1733.2	1762.8	1774.4	1759.2
35°	1718.0	1705.7	1666.7	1640.6	1635.6	1632.0	1623.3	1634.1	1671.0	1683.3	1669.6
37.5°	1579.9	1591.5	1574.8	1565.4	1564.7	1557.5	1545.2	1546.6	1566.2	1583.5	1564.0
40°	1471.4	1483.0	1493.9	1493.1	1490.2	1479.4	1470.0	1464.9	1463.5	1460.6	1464.9
42.5°	1394.1	1389.7	1410.7	1422.3	1415.0	1407.8	1399.9	1396.2	1369.5	1357.2	1373.1
45°	1314.5	1313.1	1327.6	1352.1	1346.4	1336.2	1334.1	1319.6	1274.0	1260.3	1277.7
47.5°	1232.8	1238.6	1251.6	1271.9	1275.5	1266.8	1260.3	1230.7	1184.4	1167.8	1183.7
50°	1149.0	1162.0	1180.0	1188.0	1191.6	1186.6	1182.2	1143.9	1096.9	1079.5	1097.6
52.5°	1068.7	1086.8	1110.6	1104.1	1101.2	1103.4	1096.2	1061.5	1015.9	994.9	1016.6
55°	994.9	1012.3	1033.3	1020.3	1006.5	1014.5	1008.0	980.5	940.7	914.7	939.3
57.5°	925.5	936.4	953.0	935.7	919.7	929.1	922.6	900.9	864.1	841.7	865.5
60°	851.8	860.5	869.9	853.2	836.6	841.7	838.8	819.2	788.9	769.3	787.4
62.5°	778.0	782.4	788.9	770.8	757.1	757.1	755.6	736.8	712.9	702.1	712.2
65°	705.0	704.3	706.4	688.4	678.2	676.8	673.9	656.5	637.7	630.5	638.5
67.5°	622.6	624.0	624.7	608.1	600.1	596.5	594.4	578.5	563.3	558.2	564.0
70°	541.6	542.3	542.3	527.1	521.3	515.5	513.4	501.1	488.8	485.2	490.2
72.5°	456.3	461.3	459.1	446.9	442.5	435.3	433.8	425.9	416.5	411.4	416.5
75°	373.1	380.3	378.2	367.3	362.3	355.0	355.8	351.4	341.3	337.7	342.7
77.5°	292.8	297.2	297.9	292.1	284.2	279.1	281.3	280.6	273.3	264.6	271.2
80°	219.1	224.2	224.9	219.8	213.3	209.0	211.9	211.9	206.1	198.8	204.6
82.5°	152.6	156.2	156.2	153.3	150.4	146.1	147.5	148.2	144.6	137.4	142.4
85°	95.4	96.2	94.7	92.6	90.4	88.9	88.9	90.4	87.5	83.2	86.8
87.5°	35.4	36.2	35.4	37.6	35.4	34.7	35.4	37.6	34.7	34.7	35.4
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°	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3	2051.3
2.5°	2064.4	2065.1	2065.1	2064.4	2064.4	2064.4	2063.6	2064.4
5°	2096.9	2097.6	2097.6	2096.2	2096.9	2096.2	2095.5	2096.2
7.5°	2134.5	2135.9	2135.2	2135.9	2136.7	2135.2	2135.2	2135.2
10°	2169.2	2171.4	2172.8	2174.3	2175.0	2173.5	2174.3	2173.5
12.5°	2197.4	2201.7	2204.6	2206.1	2207.5	2207.5	2206.1	2204.6
15°	2214.8	2219.8	2223.4	2227.8	2230.7	2231.4	2229.9	2229.2
17.5°	2219.1	2223.4	2228.5	2232.8	2237.2	2240.1	2241.5	2240.8
20°	2206.8	2210.4	2216.2	2222.7	2228.5	2234.3	2238.6	2240.1
22.5°	2171.4	2181.5	2192.3	2200.3	2205.4	2208.3	2210.4	2215.5
25°	2026.0	2052.8	2091.8	2121.5	2116.4	2102.7	2097.6	2102.0
27.5°	1922.6	1919.8	1915.4	1938.5	1974.7	2006.5	2021.7	2028.9
30°	1830.1	1808.4	1788.2	1796.1	1833.0	1887.9	1934.2	1953.0
32.5°	1733.2	1703.6	1700.7	1705.7	1723.1	1760.0	1822.9	1858.3
35°	1631.2	1615.3	1624.0	1630.5	1636.3	1655.1	1698.5	1730.3
37.5°	1540.1	1537.2	1548.8	1556.8	1559.7	1569.1	1585.7	1581.4
40°	1459.9	1462.0	1472.2	1480.8	1486.6	1487.4	1477.2	1469.3
42.5°	1387.6	1397.0	1397.0	1407.8	1417.9	1404.2	1383.2	1389.0
45°	1313.8	1329.0	1328.3	1337.7	1347.1	1323.2	1305.9	1310.2
47.5°	1227.0	1256.0	1260.3	1270.4	1270.4	1245.8	1232.1	1227.0
50°	1138.8	1176.4	1181.5	1187.3	1184.4	1175.0	1156.9	1144.6
52.5°	1057.1	1092.6	1097.6	1095.5	1101.2	1105.6	1081.0	1065.8
55°	976.9	1004.3	1010.9	1003.6	1017.4	1029.7	1006.5	992.8
57.5°	897.3	918.3	924.1	918.3	933.5	947.2	932.0	922.6
60°	817.1	835.9	839.5	834.4	852.5	864.8	857.6	851.8
62.5°	738.3	751.3	754.9	757.1	767.9	782.4	780.9	780.2
65°	658.7	672.5	673.9	680.4	687.6	706.4	702.8	702.8
67.5°	581.3	590.7	592.9	603.0	605.9	624.0	621.8	618.9
70°	501.1	510.5	513.4	523.5	527.8	542.3	543.0	540.9
72.5°	427.3	430.9	433.8	443.2	446.9	460.6	460.6	457.7
75°	352.1	351.4	354.3	363.7	367.3	378.9	378.2	374.6
77.5°	281.3	277.7	279.8	286.3	290.7	299.4	296.5	293.6
80°	214.8	209.0	209.7	216.2	219.1	224.9	222.0	219.8
82.5°	151.8	146.8	145.3	150.4	154.7	155.5	154.7	153.3
85°	92.6	88.2	88.9	91.1	94.0	94.0	95.4	95.4
87.5°	36.2	34.0	34.0	36.2	36.2	36.9	36.2	34.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)