

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: P241268

Luminaire Tested: **1800-X-90-L35-3-M-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241268  
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-L35-3-M-UNV-STD-X-X  
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT  
MEDIUM DISTRIBUTION.  
Light Source: (168) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5402.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 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

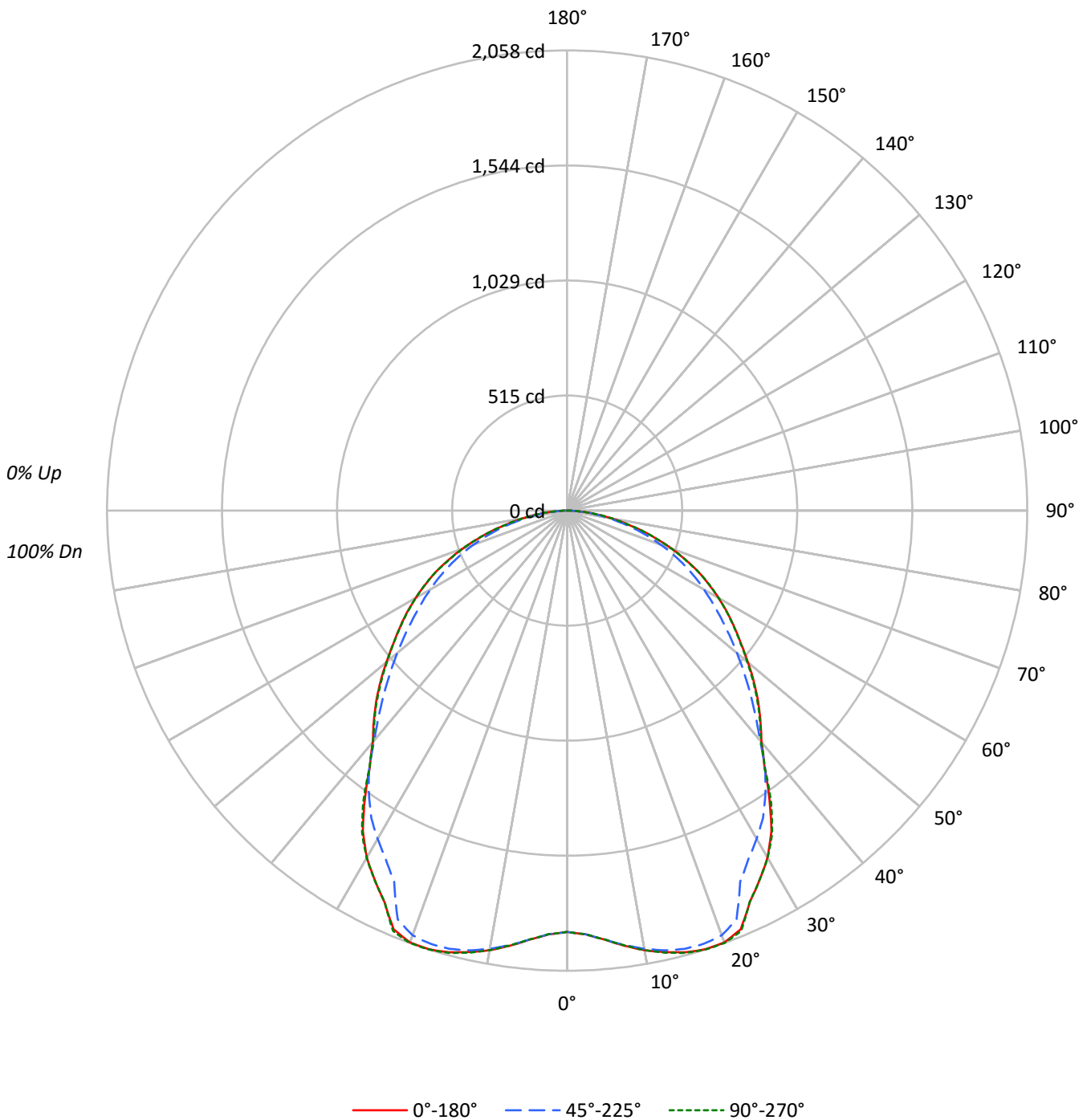
Input Watts (W): 70.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	18974	18974	18974
5°	19470	19470	19463
10°	20415	20346	20415
15°	21320	21153	21347
20°	22021	21665	22050
25°	21474	20346	21452
30°	20836	19708	20859
35°	19399	19007	19538
40°	17767	17636	17741
45°	17196	16487	17139
50°	16534	15535	16471
55°	16045	14751	16010
60°	15758	14232	15758
65°	15429	13800	15382
70°	14646	13121	14626
75°	13332	12068	13387
80°	11672	10594	11707
85°	10132	8826	10132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	186.1	3.4
10°-20°	576.7	10.7
20°-30°	872.2	16.1
30°-40°	952.1	17.6
40°-50°	934.6	17.3
50°-60°	818.2	15.1
60°-70°	614.8	11.4
70°-80°	351.5	6.5
80°-90°	95.8	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°	1635.0	30.3
0°-40°	2587.0	47.9
0°-60°	4339.9	80.3
0°-90°	5402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5402.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1884	1884	1884	1884	1884	
5°	1926	1927	1926	1926	1926	186
15°	2045	2044	2029	2044	2048	579
25°	1933	1936	1831	1935	1931	893
35°	1578	1501	1546	1495	1590	984
45°	1208	1232	1158	1224	1204	931
55°	914	928	840	925	912	820
65°	648	622	579	622	646	637
75°	343	329	310	330	344	364
85°	88	82	76	83	88	98
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°	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4
2.5°	1897.0	1895.7	1896.4	1895.7	1897.0	1897.0	1896.4	1897.0	1896.4	1896.4	1896.4
5°	1926.3	1924.9	1925.6	1924.3	1926.3	1926.9	1926.3	1926.9	1926.9	1926.3	1926.3
7.5°	1962.8	1960.1	1960.8	1959.5	1961.5	1961.5	1960.8	1960.8	1960.1	1959.5	1960.1
10°	1996.7	1995.3	1995.3	1994.7	1996.0	1995.3	1994.0	1993.4	1990.7	1990.0	1991.4
12.5°	2022.6	2023.9	2025.9	2025.9	2025.2	2024.6	2021.3	2019.3	2015.3	2014.6	2015.9
15°	2045.2	2045.8	2047.8	2047.2	2045.2	2041.8	2038.5	2034.5	2031.2	2029.2	2031.2
17.5°	2057.1	2057.1	2056.5	2054.5	2050.5	2046.5	2041.8	2037.9	2034.5	2031.9	2034.5
20°	2055.1	2055.1	2051.8	2047.8	2041.2	2035.2	2030.6	2026.6	2023.2	2021.9	2023.9
22.5°	2027.2	2029.2	2026.6	2025.9	2020.6	2012.6	2003.3	1993.4	1982.7	1979.4	1984.1
25°	1932.9	1931.6	1932.9	1945.5	1948.8	1922.3	1888.4	1857.2	1838.6	1831.3	1841.2
27.5°	1863.2	1861.8	1845.2	1818.7	1782.1	1764.9	1767.5	1764.9	1760.2	1756.9	1761.5
30°	1792.1	1782.1	1737.0	1688.5	1653.3	1648.0	1663.2	1682.5	1694.4	1695.1	1693.1
32.5°	1700.4	1680.5	1622.0	1584.9	1570.2	1567.6	1572.2	1592.2	1619.4	1630.0	1616.1
35°	1578.2	1566.9	1531.0	1507.1	1502.5	1499.2	1491.2	1501.2	1535.0	1546.3	1533.7
37.5°	1451.3	1462.0	1446.7	1438.1	1437.4	1430.8	1419.5	1420.8	1438.7	1454.7	1436.7
40°	1351.7	1362.3	1372.3	1371.6	1369.0	1359.0	1350.4	1345.7	1344.4	1341.7	1345.7
42.5°	1280.6	1276.6	1295.9	1306.5	1299.9	1293.3	1285.9	1282.6	1258.1	1246.8	1261.4
45°	1207.6	1206.2	1219.5	1242.1	1236.8	1227.5	1225.5	1212.2	1170.4	1157.8	1173.7
47.5°	1132.5	1137.8	1149.8	1168.4	1171.7	1163.7	1157.8	1130.5	1088.0	1072.7	1087.3
50°	1055.5	1067.4	1084.0	1091.3	1094.7	1090.0	1086.0	1050.8	1007.6	991.7	1008.3
52.5°	981.7	998.3	1020.3	1014.3	1011.6	1013.6	1007.0	975.1	933.2	914.0	933.9
55°	914.0	929.9	949.2	937.2	924.6	931.9	925.9	900.7	864.2	840.3	862.8
57.5°	850.2	860.2	875.5	859.5	844.9	853.5	847.6	827.6	793.8	773.2	795.1
60°	782.5	790.4	799.1	783.8	768.5	773.2	770.5	752.6	724.7	706.7	723.3
62.5°	714.7	718.7	724.7	708.1	695.4	695.4	694.1	676.9	654.9	645.0	654.3
65°	647.6	647.0	649.0	632.3	623.0	621.7	619.1	603.1	585.9	579.2	586.5
67.5°	571.9	573.2	573.9	558.6	551.3	548.0	546.0	531.4	517.4	512.8	518.1
70°	497.5	498.2	498.2	484.2	478.9	473.6	471.6	460.3	449.0	445.7	450.3
72.5°	419.1	423.8	421.8	410.5	406.5	399.9	398.5	391.2	382.6	377.9	382.6
75°	342.7	349.4	347.4	337.4	332.8	326.1	326.8	322.8	313.5	310.2	314.8
77.5°	269.0	273.0	273.7	268.3	261.0	256.4	258.4	257.7	251.1	243.1	249.1
80°	201.3	205.9	206.6	201.9	195.9	192.0	194.6	194.6	189.3	182.7	188.0
82.5°	140.2	143.5	143.5	140.8	138.2	134.2	135.5	136.2	132.8	126.2	130.9
85°	87.7	88.3	87.0	85.0	83.0	81.7	81.7	83.0	80.4	76.4	79.7
87.5°	32.5	33.2	32.5	34.5	32.5	31.9	32.5	34.5	31.9	31.9	32.5
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°	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4	1884.4
2.5°	1896.4	1897.0	1897.0	1896.4	1896.4	1896.4	1895.7	1896.4
5°	1926.3	1926.9	1926.9	1925.6	1926.3	1925.6	1924.9	1925.6
7.5°	1960.8	1962.1	1961.5	1962.1	1962.8	1961.5	1961.5	1961.5
10°	1992.7	1994.7	1996.0	1997.3	1998.0	1996.7	1997.3	1996.7
12.5°	2018.6	2022.6	2025.2	2026.6	2027.9	2027.9	2026.6	2025.2
15°	2034.5	2039.2	2042.5	2046.5	2049.1	2049.8	2048.5	2047.8
17.5°	2038.5	2042.5	2047.2	2051.1	2055.1	2057.8	2059.1	2058.4
20°	2027.2	2030.6	2035.9	2041.8	2047.2	2052.5	2056.5	2057.8
22.5°	1994.7	2004.0	2013.9	2021.3	2025.9	2028.6	2030.6	2035.2
25°	1861.2	1885.7	1921.6	1948.8	1944.2	1931.6	1926.9	1930.9
27.5°	1766.2	1763.5	1759.5	1780.8	1814.0	1843.2	1857.2	1863.8
30°	1681.2	1661.2	1642.6	1649.9	1683.8	1734.3	1776.8	1794.1
32.5°	1592.2	1564.9	1562.3	1566.9	1582.9	1616.7	1674.5	1707.1
35°	1498.5	1483.9	1491.9	1497.8	1503.2	1520.4	1560.3	1589.5
37.5°	1414.8	1412.2	1422.8	1430.1	1432.7	1441.4	1456.7	1452.7
40°	1341.1	1343.1	1352.4	1360.3	1365.7	1366.3	1357.0	1349.7
42.5°	1274.7	1283.3	1283.3	1293.3	1302.6	1289.9	1270.7	1276.0
45°	1206.9	1220.9	1220.2	1228.8	1237.5	1215.5	1199.6	1203.6
47.5°	1127.2	1153.8	1157.8	1167.1	1167.1	1144.5	1131.8	1127.2
50°	1046.2	1080.7	1085.4	1090.7	1088.0	1079.4	1062.8	1051.5
52.5°	971.1	1003.7	1008.3	1006.3	1011.6	1015.6	993.0	979.1
55°	897.4	922.6	928.6	922.0	934.6	945.9	924.6	912.0
57.5°	824.3	843.6	848.9	843.6	857.5	870.1	856.2	847.6
60°	750.6	767.8	771.2	766.5	783.1	794.4	787.8	782.5
62.5°	678.2	690.1	693.5	695.4	705.4	718.7	717.4	716.7
65°	605.1	617.7	619.1	625.0	631.7	649.0	645.6	645.6
67.5°	534.0	542.7	544.7	554.0	556.6	573.2	571.2	568.6
70°	460.3	468.9	471.6	480.9	484.9	498.2	498.8	496.8
72.5°	392.6	395.9	398.5	407.2	410.5	423.1	423.1	420.5
75°	323.5	322.8	325.5	334.1	337.4	348.1	347.4	344.1
77.5°	258.4	255.1	257.1	263.0	267.0	275.0	272.3	269.7
80°	197.3	192.0	192.6	198.6	201.3	206.6	203.9	201.9
82.5°	139.5	134.8	133.5	138.2	142.1	142.8	142.1	140.8
85°	85.0	81.0	81.7	83.7	86.3	86.3	87.7	87.7
87.5°	33.2	31.2	31.2	33.2	33.2	33.9	33.2	31.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)