

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: P241272

Luminaire Tested: **1800-X-90-L27-4-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241272
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-L27-4-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5624.4 lumens
Efficiency: N/A
Efficacy: 67.8 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

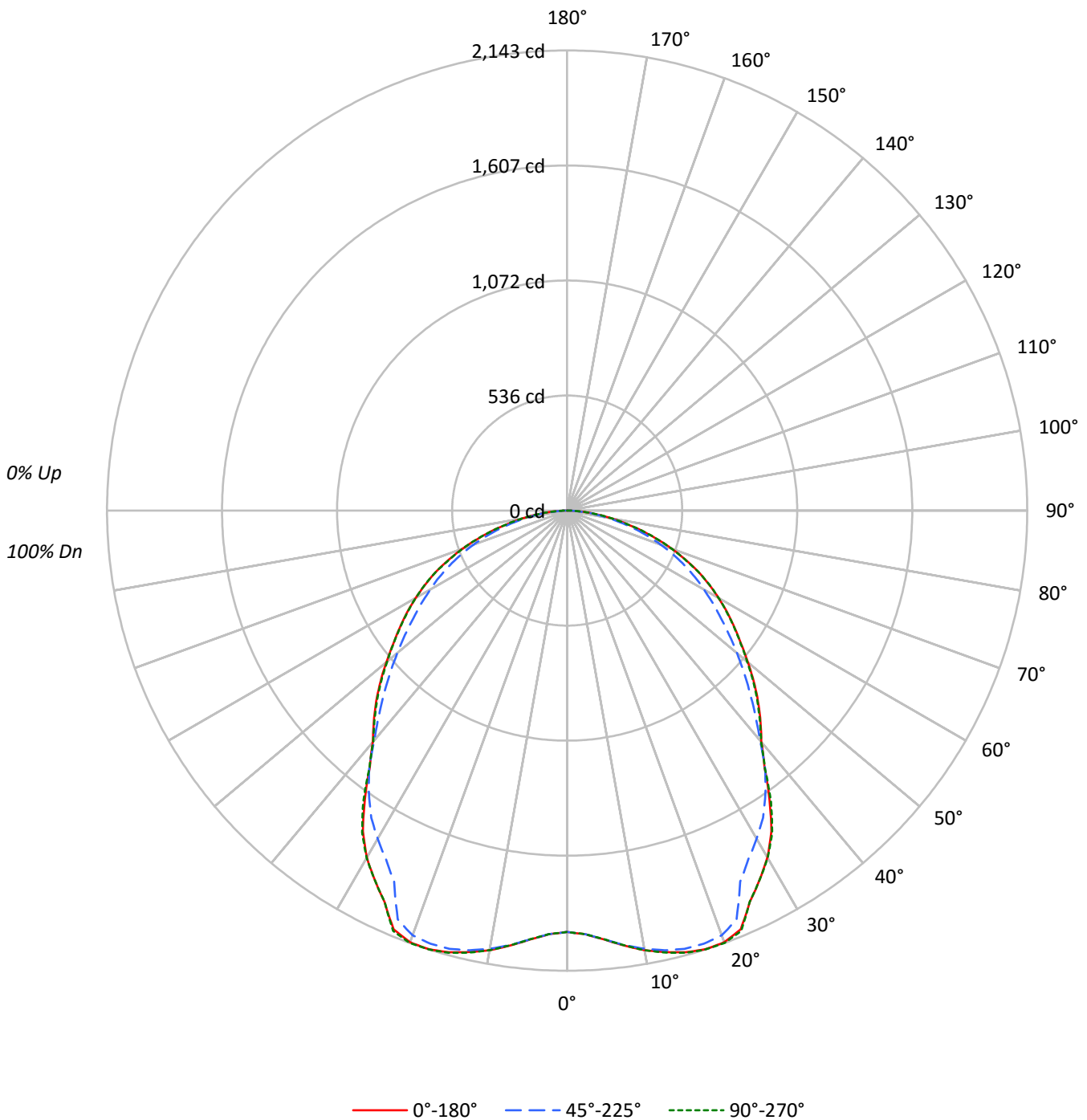
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	19755	19755	19755
5°	20272	20272	20264
10°	21255	21185	21255
15°	22197	22024	22225
20°	22927	22557	22957
25°	22359	21183	22335
30°	21694	20520	21717
35°	20198	19790	20342
40°	18498	18362	18471
45°	17904	17165	17844
50°	17214	16174	17150
55°	16705	15357	16668
60°	16406	14818	16406
65°	16065	14369	16015
70°	15250	13660	15229
75°	13885	12566	13935
80°	12148	11029	12188
85°	10548	9185	10548



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	3.4
10°-20°	600.5	10.7
20°-30°	908.1	16.1
30°-40°	991.3	17.6
40°-50°	973.1	17.3
50°-60°	851.9	15.1
60°-70°	640.1	11.4
70°-80°	366.0	6.5
80°-90°	99.8	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°	1702.3	30.3
0°-40°	2693.5	47.9
0°-60°	4518.5	80.3
0°-90°	5624.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5624.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1962	1962	1962	1962	1962	
5°	2006	2006	2006	2006	2005	194
15°	2129	2128	2113	2129	2132	602
25°	2012	2015	1907	2015	2010	929
35°	1643	1563	1610	1556	1655	1025
45°	1257	1283	1205	1275	1253	969
55°	952	966	875	963	950	853
65°	674	648	603	648	672	663
75°	357	343	323	343	358	379
85°	91	86	80	86	91	102
90°	0	0	0	0	0	



TEST NUMBER: P241272

CATALOG NUMBER: 1800-X-90-L27-4-M-UNV-STD-X-X

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0
2.5°	1975.1	1973.7	1974.4	1973.7	1975.1	1975.1	1974.4	1975.1	1974.4	1974.4	1974.4
5°	2005.6	2004.2	2004.9	2003.5	2005.6	2006.3	2005.6	2006.3	2006.3	2005.6	2005.6
7.5°	2043.6	2040.8	2041.5	2040.1	2042.2	2042.2	2041.5	2041.5	2040.8	2040.1	2040.8
10°	2078.9	2077.5	2077.5	2076.8	2078.2	2077.5	2076.1	2075.4	2072.6	2072.0	2073.3
12.5°	2105.8	2107.2	2109.3	2109.3	2108.6	2107.9	2104.5	2102.4	2098.2	2097.5	2098.9
15°	2129.4	2130.0	2132.1	2131.4	2129.4	2125.9	2122.4	2118.3	2114.8	2112.8	2114.8
17.5°	2141.8	2141.8	2141.1	2139.0	2134.9	2130.7	2125.9	2121.7	2118.3	2115.5	2118.3
20°	2139.7	2139.7	2136.3	2132.1	2125.2	2119.0	2114.1	2110.0	2106.5	2105.1	2107.2
22.5°	2110.7	2112.8	2110.0	2109.3	2103.8	2095.5	2085.8	2075.4	2064.3	2060.9	2065.7
25°	2012.5	2011.1	2012.5	2025.6	2029.1	2001.4	1966.1	1933.6	1914.3	1906.7	1917.0
27.5°	1939.9	1938.5	1921.2	1893.5	1855.5	1837.5	1840.3	1837.5	1832.7	1829.2	1834.0
30°	1865.9	1855.5	1808.5	1758.0	1721.3	1715.8	1731.7	1751.8	1764.2	1764.9	1762.8
32.5°	1770.4	1749.7	1688.8	1650.1	1634.9	1632.1	1637.0	1657.7	1686.1	1697.1	1682.6
35°	1643.2	1631.4	1594.1	1569.2	1564.3	1560.9	1552.6	1563.0	1598.2	1610.0	1596.8
37.5°	1511.1	1522.2	1506.2	1497.3	1496.6	1489.6	1477.9	1479.3	1497.9	1514.5	1495.9
40°	1407.3	1418.4	1428.8	1428.1	1425.3	1415.0	1406.0	1401.1	1399.7	1397.0	1401.1
42.5°	1333.4	1329.2	1349.3	1360.3	1353.4	1346.5	1338.9	1335.4	1309.8	1298.1	1313.3
45°	1257.3	1255.9	1269.7	1293.2	1287.7	1278.0	1276.0	1262.1	1218.6	1205.4	1222.0
47.5°	1179.1	1184.7	1197.1	1216.5	1219.9	1211.6	1205.4	1177.1	1132.8	1116.9	1132.1
50°	1098.9	1111.4	1128.6	1136.3	1139.7	1134.9	1130.7	1094.1	1049.1	1032.5	1049.8
52.5°	1022.1	1039.4	1062.3	1056.0	1053.3	1055.3	1048.4	1015.2	971.7	951.6	972.4
55°	951.6	968.2	988.3	975.8	962.7	970.3	964.1	937.8	899.7	874.8	898.4
57.5°	885.2	895.6	911.5	894.9	879.7	888.7	882.4	861.7	826.4	805.0	827.8
60°	814.7	823.0	832.0	816.1	800.1	805.0	802.2	783.6	754.5	735.8	753.1
62.5°	744.1	748.3	754.5	737.2	724.1	724.1	722.7	704.7	681.9	671.5	681.2
65°	674.3	673.6	675.7	658.4	648.7	647.3	644.5	627.9	610.0	603.1	610.7
67.5°	595.4	596.8	597.5	581.6	574.0	570.5	568.5	553.3	538.7	533.9	539.4
70°	518.0	518.7	518.7	504.2	498.6	493.1	491.0	479.3	467.5	464.0	468.9
72.5°	436.4	441.2	439.1	427.4	423.2	416.3	414.9	407.3	398.3	393.5	398.3
75°	356.9	363.8	361.7	351.3	346.5	339.6	340.3	336.1	326.4	323.0	327.8
77.5°	280.1	284.2	284.9	279.4	271.8	266.9	269.0	268.3	261.4	253.1	259.3
80°	209.5	214.4	215.1	210.2	204.0	199.9	202.6	202.6	197.1	190.2	195.7
82.5°	145.9	149.4	149.4	146.6	143.8	139.7	141.1	141.8	138.3	131.4	136.2
85°	91.3	92.0	90.6	88.5	86.4	85.1	85.1	86.4	83.7	79.5	83.0
87.5°	33.9	34.6	33.9	36.0	33.9	33.2	33.9	36.0	33.2	33.2	33.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P241272

CATALOG NUMBER: 1800-X-90-L27-4-M-UNV-STD-X-X

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0	1962.0
2.5°	1974.4	1975.1	1975.1	1974.4	1974.4	1974.4	1973.7	1974.4
5°	2005.6	2006.3	2006.3	2004.9	2005.6	2004.9	2004.2	2004.9
7.5°	2041.5	2042.9	2042.2	2042.9	2043.6	2042.2	2042.2	2042.2
10°	2074.7	2076.8	2078.2	2079.6	2080.2	2078.9	2079.6	2078.9
12.5°	2101.7	2105.8	2108.6	2110.0	2111.4	2111.4	2110.0	2108.6
15°	2118.3	2123.1	2126.6	2130.7	2133.5	2134.2	2132.8	2132.1
17.5°	2122.4	2126.6	2131.4	2135.6	2139.7	2142.5	2143.9	2143.2
20°	2110.7	2114.1	2119.7	2125.9	2131.4	2137.0	2141.1	2142.5
22.5°	2076.8	2086.5	2096.8	2104.5	2109.3	2112.1	2114.1	2119.0
25°	1937.8	1963.4	2000.7	2029.1	2024.2	2011.1	2006.3	2010.4
27.5°	1838.9	1836.1	1832.0	1854.1	1888.7	1919.1	1933.6	1940.6
30°	1750.4	1729.6	1710.3	1717.9	1753.1	1805.7	1850.0	1867.9
32.5°	1657.7	1629.3	1626.6	1631.4	1648.0	1683.3	1743.5	1777.3
35°	1560.2	1545.0	1553.3	1559.5	1565.0	1583.0	1624.5	1654.9
37.5°	1473.0	1470.3	1481.3	1489.0	1491.7	1500.7	1516.6	1512.5
40°	1396.3	1398.4	1408.0	1416.3	1421.9	1422.6	1412.9	1405.3
42.5°	1327.1	1336.1	1336.1	1346.5	1356.2	1343.0	1323.0	1328.5
45°	1256.6	1271.1	1270.4	1279.4	1288.4	1265.6	1249.0	1253.1
47.5°	1173.6	1201.3	1205.4	1215.1	1215.1	1191.6	1178.4	1173.6
50°	1089.2	1125.2	1130.0	1135.6	1132.8	1123.8	1106.5	1094.8
52.5°	1011.1	1045.0	1049.8	1047.7	1053.3	1057.4	1033.9	1019.4
55°	934.3	960.6	966.8	959.9	973.0	984.8	962.7	949.5
57.5°	858.2	878.3	883.8	878.3	892.8	906.0	891.4	882.4
60°	781.5	799.5	802.9	798.1	815.4	827.1	820.2	814.7
62.5°	706.1	718.5	722.0	724.1	734.4	748.3	746.9	746.2
65°	630.0	643.2	644.5	650.8	657.7	675.7	672.2	672.2
67.5°	556.0	565.0	567.1	576.8	579.5	596.8	594.8	592.0
70°	479.3	488.2	491.0	500.7	504.8	518.7	519.4	517.3
72.5°	408.7	412.2	414.9	423.9	427.4	440.5	440.5	437.8
75°	336.8	336.1	338.9	347.9	351.3	362.4	361.7	358.2
77.5°	269.0	265.6	267.6	273.9	278.0	286.3	283.5	280.8
80°	205.4	199.9	200.6	206.8	209.5	215.1	212.3	210.2
82.5°	145.2	140.4	139.0	143.8	148.0	148.7	148.0	146.6
85°	88.5	84.4	85.1	87.1	89.9	89.9	91.3	91.3
87.5°	34.6	32.5	32.5	34.6	34.6	35.3	34.6	33.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)