

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: P241264

Luminaire Tested: **1800-X-90-L27-3-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241264
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-L27-3-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: 5039.1 lumens
Efficiency: N/A
Efficacy: 71.4 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

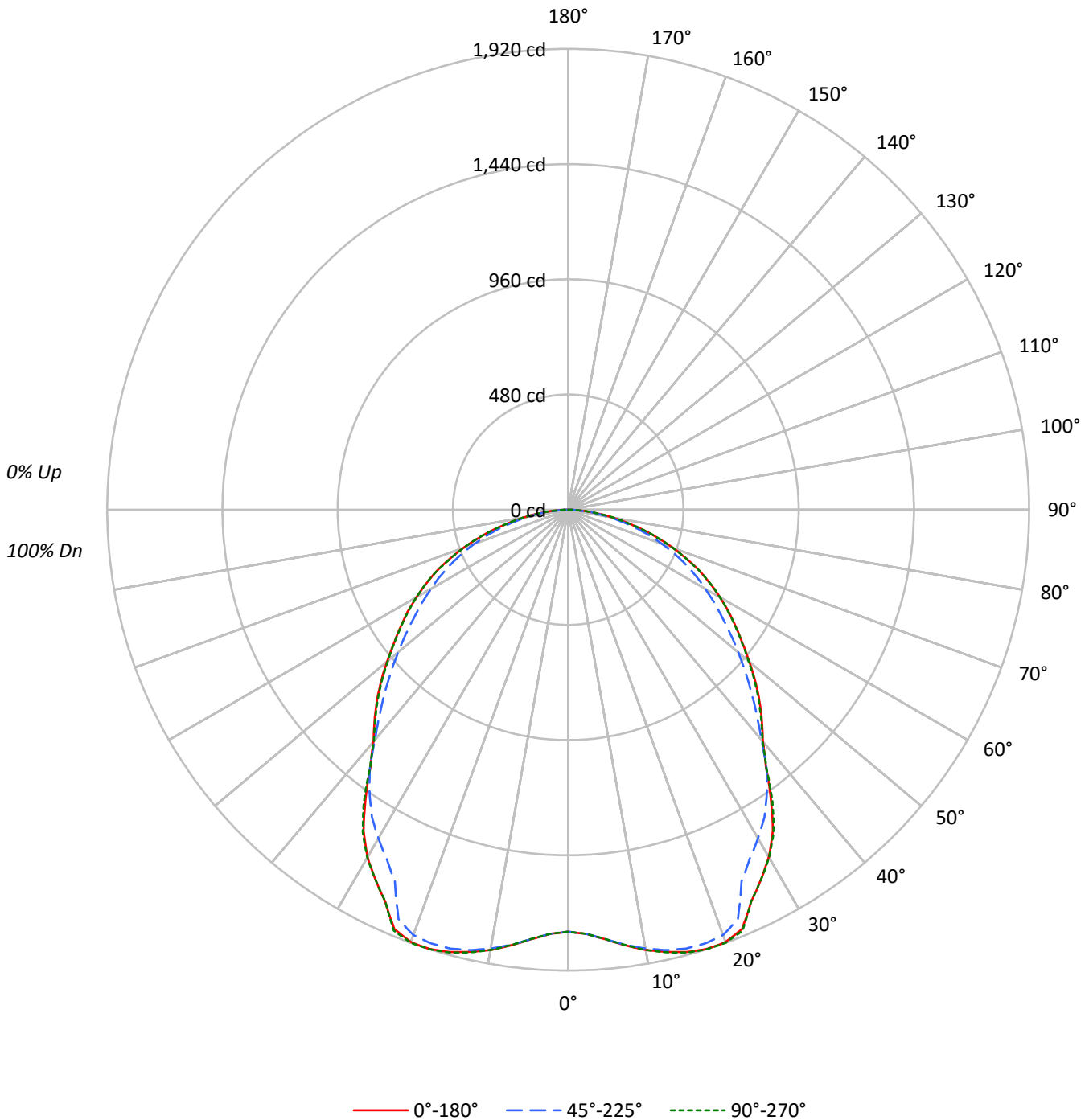
Input Watts (W): 70.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	17699	17699	17699
5°	18162	18162	18155
10°	19043	18979	19043
15°	19887	19732	19912
20°	20542	20210	20568
25°	20032	18979	20011
30°	19436	18384	19458
35°	18096	17730	18225
40°	16573	16451	16548
45°	16040	15379	15987
50°	15423	14491	15364
55°	14967	13759	14934
60°	14699	13277	14699
65°	14393	12873	14350
70°	13663	12241	13645
75°	12437	11259	12488
80°	10884	9881	10924
85°	9450	8237	9450



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.6	3.4
10°-20°	538.0	10.7
20°-30°	813.6	16.1
30°-40°	888.1	17.6
40°-50°	871.8	17.3
50°-60°	763.2	15.1
60°-70°	573.5	11.4
70°-80°	327.9	6.5
80°-90°	89.4	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°	1525.1	30.3
0°-40°	2413.2	47.9
0°-60°	4048.3	80.3
0°-90°	5039.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5039.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1758	1758	1758	1758	1758	
5°	1797	1797	1797	1797	1796	174
15°	1908	1906	1893	1907	1910	540
25°	1803	1806	1708	1805	1801	833
35°	1472	1400	1442	1394	1483	918
45°	1126	1149	1080	1142	1123	868
55°	853	866	784	863	851	765
65°	604	581	540	580	602	594
75°	320	307	289	308	321	339
85°	82	77	71	77	82	92
90°	0	0	0	0	0	



TEST NUMBER: P241264

CATALOG NUMBER: 1800-X-90-L27-3-M-UNV-STD-X-X

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8
2.5°	1769.6	1768.4	1769.0	1768.4	1769.6	1769.6	1769.0	1769.6	1769.0	1769.0	1769.0
5°	1796.9	1795.6	1796.2	1795.0	1796.9	1797.5	1796.9	1797.5	1797.5	1796.9	1796.9
7.5°	1830.9	1828.5	1829.1	1827.8	1829.7	1829.7	1829.1	1829.1	1828.5	1827.8	1828.5
10°	1862.5	1861.3	1861.3	1860.7	1861.9	1861.3	1860.1	1859.4	1857.0	1856.3	1857.6
12.5°	1886.7	1887.9	1889.8	1889.8	1889.2	1888.6	1885.5	1883.6	1879.9	1879.3	1880.5
15°	1907.8	1908.4	1910.2	1909.6	1907.8	1904.7	1901.6	1897.9	1894.8	1892.9	1894.8
17.5°	1918.9	1918.9	1918.3	1916.4	1912.7	1909.0	1904.7	1901.0	1897.9	1895.4	1897.9
20°	1917.1	1917.1	1914.0	1910.2	1904.0	1898.5	1894.1	1890.4	1887.3	1886.1	1887.9
22.5°	1891.0	1892.9	1890.4	1889.8	1884.8	1877.4	1868.7	1859.4	1849.5	1846.4	1850.8
25°	1803.1	1801.8	1803.1	1814.8	1817.9	1793.1	1761.5	1732.4	1715.1	1708.3	1717.5
27.5°	1738.0	1736.8	1721.3	1696.5	1662.4	1646.3	1648.8	1646.3	1642.0	1638.9	1643.2
30°	1671.7	1662.4	1620.3	1575.0	1542.2	1537.2	1551.5	1569.5	1580.6	1581.2	1579.4
32.5°	1586.2	1567.6	1513.1	1478.4	1464.7	1462.3	1466.6	1485.2	1510.6	1520.5	1507.5
35°	1472.2	1461.7	1428.2	1405.9	1401.5	1398.5	1391.0	1400.3	1431.9	1442.4	1430.7
37.5°	1353.8	1363.8	1349.5	1341.4	1340.8	1334.6	1324.1	1325.3	1342.1	1356.9	1340.2
40°	1260.9	1270.8	1280.1	1279.5	1277.0	1267.7	1259.7	1255.3	1254.1	1251.6	1255.3
42.5°	1194.6	1190.9	1208.9	1218.8	1212.6	1206.4	1199.6	1196.5	1173.5	1163.0	1176.6
45°	1126.4	1125.2	1137.6	1158.7	1153.7	1145.0	1143.2	1130.8	1091.7	1080.0	1094.8
47.5°	1056.4	1061.4	1072.5	1089.9	1093.0	1085.5	1080.0	1054.6	1014.9	1000.7	1014.3
50°	984.6	995.7	1011.2	1018.0	1021.1	1016.8	1013.1	980.2	939.9	925.1	940.6
52.5°	915.8	931.3	951.7	946.1	943.7	945.5	939.3	909.6	870.5	852.6	871.2
55°	852.6	867.4	885.4	874.3	862.5	869.3	863.7	840.2	806.1	783.8	804.9
57.5°	793.1	802.4	816.6	801.8	788.1	796.2	790.6	772.0	740.4	721.2	741.7
60°	729.9	737.3	745.4	731.1	716.9	721.2	718.7	702.0	676.0	659.3	674.8
62.5°	666.7	670.4	676.0	660.5	648.7	648.7	647.5	631.4	610.9	601.6	610.3
65°	604.1	603.5	605.4	589.9	581.2	580.0	577.5	562.6	546.5	540.3	547.1
67.5°	533.5	534.7	535.3	521.1	514.3	511.2	509.3	495.7	482.7	478.3	483.3
70°	464.1	464.7	464.7	451.7	446.7	441.8	439.9	429.4	418.9	415.8	420.1
72.5°	391.0	395.3	393.4	382.9	379.2	373.0	371.8	364.9	356.9	352.6	356.9
75°	319.7	325.9	324.1	314.8	310.4	304.2	304.8	301.1	292.5	289.4	293.7
77.5°	250.9	254.7	255.3	250.3	243.5	239.2	241.0	240.4	234.2	226.8	232.4
80°	187.7	192.1	192.7	188.4	182.8	179.1	181.5	181.5	176.6	170.4	175.3
82.5°	130.7	133.8	133.8	131.4	128.9	125.2	126.4	127.0	123.9	117.7	122.1
85°	81.8	82.4	81.2	79.3	77.5	76.2	76.2	77.5	75.0	71.3	74.4
87.5°	30.4	31.0	30.4	32.2	30.4	29.7	30.4	32.2	29.7	29.7	30.4
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°	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8
2.5°	1769.0	1769.6	1769.6	1769.0	1769.0	1769.0	1768.4	1769.0
5°	1796.9	1797.5	1797.5	1796.2	1796.9	1796.2	1795.6	1796.2
7.5°	1829.1	1830.3	1829.7	1830.3	1830.9	1829.7	1829.7	1829.7
10°	1858.8	1860.7	1861.9	1863.2	1863.8	1862.5	1863.2	1862.5
12.5°	1883.0	1886.7	1889.2	1890.4	1891.7	1891.7	1890.4	1889.2
15°	1897.9	1902.2	1905.3	1909.0	1911.5	1912.1	1910.9	1910.2
17.5°	1901.6	1905.3	1909.6	1913.3	1917.1	1919.5	1920.8	1920.2
20°	1891.0	1894.1	1899.1	1904.7	1909.6	1914.6	1918.3	1919.5
22.5°	1860.7	1869.4	1878.6	1885.5	1889.8	1892.3	1894.1	1898.5
25°	1736.1	1759.1	1792.5	1817.9	1813.6	1801.8	1797.5	1801.2
27.5°	1647.5	1645.1	1641.3	1661.2	1692.1	1719.4	1732.4	1738.6
30°	1568.2	1549.6	1532.3	1539.1	1570.7	1617.8	1657.4	1673.6
32.5°	1485.2	1459.8	1457.3	1461.7	1476.5	1508.1	1562.0	1592.4
35°	1397.8	1384.2	1391.6	1397.2	1402.2	1418.3	1455.5	1482.7
37.5°	1319.8	1317.3	1327.2	1334.0	1336.5	1344.5	1358.8	1355.1
40°	1251.0	1252.8	1261.5	1269.0	1273.9	1274.5	1265.9	1259.0
42.5°	1189.0	1197.1	1197.1	1206.4	1215.0	1203.3	1185.3	1190.3
45°	1125.8	1138.8	1138.2	1146.3	1154.3	1133.9	1119.0	1122.7
47.5°	1051.5	1076.3	1080.0	1088.6	1088.6	1067.6	1055.8	1051.5
50°	975.9	1008.1	1012.4	1017.4	1014.9	1006.9	991.4	980.8
52.5°	905.9	936.2	940.6	938.7	943.7	947.4	926.3	913.3
55°	837.1	860.6	866.2	860.0	871.8	882.3	862.5	850.7
57.5°	768.9	786.9	791.9	786.9	799.9	811.7	798.7	790.6
60°	700.2	716.3	719.4	715.0	730.5	741.0	734.9	729.9
62.5°	632.6	643.8	646.9	648.7	658.0	670.4	669.2	668.6
65°	564.5	576.2	577.5	583.0	589.2	605.4	602.3	602.3
67.5°	498.2	506.2	508.1	516.8	519.2	534.7	532.9	530.4
70°	429.4	437.4	439.9	448.6	452.3	464.7	465.3	463.5
72.5°	366.2	369.3	371.8	379.8	382.9	394.7	394.7	392.2
75°	301.7	301.1	303.6	311.7	314.8	324.7	324.1	321.0
77.5°	241.0	237.9	239.8	245.4	249.1	256.5	254.0	251.6
80°	184.0	179.1	179.7	185.3	187.7	192.7	190.2	188.4
82.5°	130.1	125.8	124.5	128.9	132.6	133.2	132.6	131.4
85°	79.3	75.6	76.2	78.1	80.5	80.5	81.8	81.8
87.5°	31.0	29.1	29.1	31.0	31.0	31.6	31.0	29.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)