

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: P241224

Luminaire Tested: **1800-X-80-L27-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241224
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-80-L27-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4972.4 lumens
Efficiency: N/A
Efficacy: 92.3 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

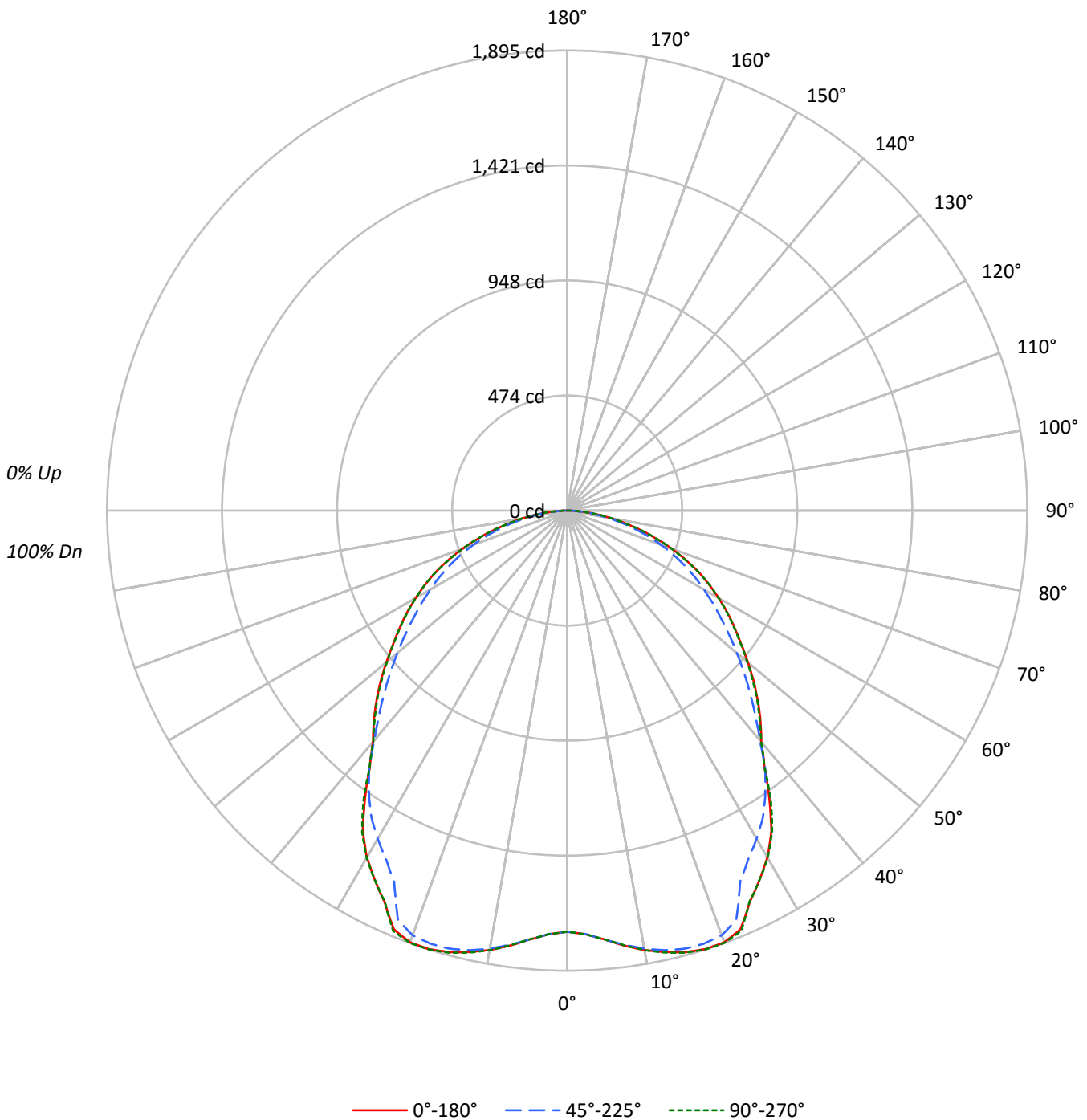
Input Watts (W): 53.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	17465	17465	17465
5°	17922	17922	17914
10°	18791	18728	18791
15°	19624	19470	19649
20°	20270	19942	20296
25°	19767	18727	19746
30°	19179	18141	19200
35°	17857	17495	17984
40°	16354	16233	16330
45°	15827	15175	15776
50°	15218	14299	15160
55°	14769	13577	14735
60°	14503	13100	14503
65°	14202	12701	14159
70°	13480	12076	13463
75°	12274	11107	12321
80°	10745	9747	10779
85°	9323	8122	9323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.3	3.4
10°-20°	530.9	10.7
20°-30°	802.8	16.1
30°-40°	876.4	17.6
40°-50°	860.3	17.3
50°-60°	753.1	15.1
60°-70°	565.9	11.4
70°-80°	323.5	6.5
80°-90°	88.2	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°	1504.9	30.3
0°-40°	2381.3	47.9
0°-60°	3994.7	80.3
0°-90°	4972.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4972.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1734	1734	1734	1734	1734	
5°	1773	1773	1773	1773	1772	171
15°	1882	1881	1868	1882	1885	533
25°	1779	1782	1686	1781	1777	822
35°	1453	1381	1423	1376	1463	906
45°	1112	1134	1066	1127	1108	857
55°	841	854	773	852	839	754
65°	596	573	533	573	594	586
75°	316	303	286	304	317	335
85°	81	76	70	76	81	90
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°	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5
2.5°	1746.2	1744.9	1745.5	1744.9	1746.2	1746.2	1745.5	1746.2	1745.5	1745.5	1745.5
5°	1773.1	1771.8	1772.4	1771.2	1773.1	1773.7	1773.1	1773.7	1773.7	1773.1	1773.1
7.5°	1806.7	1804.2	1804.8	1803.6	1805.5	1805.5	1804.8	1804.8	1804.2	1803.6	1804.2
10°	1837.9	1836.6	1836.6	1836.0	1837.3	1836.6	1835.4	1834.8	1832.4	1831.7	1833.0
12.5°	1861.7	1862.9	1864.8	1864.8	1864.2	1863.5	1860.5	1858.6	1855.0	1854.4	1855.6
15°	1882.5	1883.1	1884.9	1884.3	1882.5	1879.4	1876.4	1872.7	1869.7	1867.8	1869.7
17.5°	1893.5	1893.5	1892.9	1891.1	1887.4	1883.7	1879.4	1875.8	1872.7	1870.3	1872.7
20°	1891.7	1891.7	1888.6	1884.9	1878.8	1873.3	1869.0	1865.4	1862.3	1861.1	1862.9
22.5°	1866.0	1867.8	1865.4	1864.8	1859.9	1852.5	1844.0	1834.8	1825.0	1822.0	1826.2
25°	1779.2	1777.9	1779.2	1790.8	1793.8	1769.4	1738.2	1709.5	1692.3	1685.6	1694.8
27.5°	1715.0	1713.7	1698.5	1674.0	1640.4	1624.5	1626.9	1624.5	1620.2	1617.1	1621.4
30°	1649.6	1640.4	1598.8	1554.2	1521.8	1516.9	1530.9	1548.7	1559.7	1560.3	1558.5
32.5°	1565.2	1546.8	1493.0	1458.8	1445.3	1442.9	1447.2	1465.5	1490.6	1500.4	1487.5
35°	1452.7	1442.3	1409.3	1387.3	1383.0	1379.9	1372.6	1381.8	1412.9	1423.3	1411.7
37.5°	1335.9	1345.7	1331.6	1323.7	1323.1	1317.0	1306.6	1307.8	1324.3	1339.0	1322.5
40°	1244.2	1254.0	1263.1	1262.5	1260.1	1250.9	1243.0	1238.7	1237.5	1235.0	1238.7
42.5°	1178.8	1175.1	1192.8	1202.6	1196.5	1190.4	1183.7	1180.6	1158.0	1147.6	1161.0
45°	1111.5	1110.3	1122.5	1143.3	1138.4	1129.9	1128.0	1115.8	1077.3	1065.7	1080.3
47.5°	1042.4	1047.3	1058.3	1075.4	1078.5	1071.2	1065.7	1040.6	1001.5	987.4	1000.9
50°	971.5	982.5	997.8	1004.5	1007.6	1003.3	999.6	967.2	927.5	912.8	928.1
52.5°	903.6	918.9	939.1	933.6	931.2	933.0	926.9	897.5	859.0	841.3	859.6
55°	841.3	856.0	873.7	862.7	851.1	857.8	852.3	829.1	795.4	773.4	794.2
57.5°	782.6	791.8	805.8	791.1	777.7	785.6	780.1	761.8	730.6	711.7	731.8
60°	720.2	727.6	735.5	721.4	707.4	711.7	709.2	692.7	667.0	650.5	665.8
62.5°	657.9	661.5	667.0	651.7	640.1	640.1	638.9	623.0	602.8	593.7	602.2
65°	596.1	595.5	597.3	582.1	573.5	572.3	569.8	555.1	539.3	533.1	539.9
67.5°	526.4	527.6	528.2	514.2	507.5	504.4	502.6	489.1	476.3	472.0	476.9
70°	457.9	458.5	458.5	445.7	440.8	435.9	434.1	423.7	413.3	410.2	414.5
72.5°	385.8	390.1	388.2	377.8	374.2	368.1	366.8	360.1	352.2	347.9	352.2
75°	315.5	321.6	319.8	310.6	306.3	300.2	300.8	297.1	288.6	285.5	289.8
77.5°	247.6	251.3	251.9	247.0	240.3	236.0	237.8	237.2	231.1	223.8	229.3
80°	185.3	189.5	190.1	185.9	180.4	176.7	179.1	179.1	174.2	168.1	173.0
82.5°	129.0	132.1	132.1	129.6	127.2	123.5	124.7	125.3	122.3	116.2	120.4
85°	80.7	81.3	80.1	78.3	76.4	75.2	75.2	76.4	74.0	70.3	73.4
87.5°	30.0	30.6	30.0	31.8	30.0	29.3	30.0	31.8	29.3	29.3	30.0
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°	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5	1734.5
2.5°	1745.5	1746.2	1746.2	1745.5	1745.5	1745.5	1744.9	1745.5
5°	1773.1	1773.7	1773.7	1772.4	1773.1	1772.4	1771.8	1772.4
7.5°	1804.8	1806.1	1805.5	1806.1	1806.7	1805.5	1805.5	1805.5
10°	1834.2	1836.0	1837.3	1838.5	1839.1	1837.9	1838.5	1837.9
12.5°	1858.0	1861.7	1864.2	1865.4	1866.6	1866.6	1865.4	1864.2
15°	1872.7	1877.0	1880.0	1883.7	1886.2	1886.8	1885.6	1884.9
17.5°	1876.4	1880.0	1884.3	1888.0	1891.7	1894.1	1895.3	1894.7
20°	1866.0	1869.0	1873.9	1879.4	1884.3	1889.2	1892.9	1894.1
22.5°	1836.0	1844.6	1853.8	1860.5	1864.8	1867.2	1869.0	1873.3
25°	1713.1	1735.8	1768.8	1793.8	1789.6	1777.9	1773.7	1777.3
27.5°	1625.7	1623.3	1619.6	1639.2	1669.7	1696.6	1709.5	1715.6
30°	1547.4	1529.1	1512.0	1518.7	1549.9	1596.4	1635.5	1651.4
32.5°	1465.5	1440.5	1438.0	1442.3	1457.0	1488.1	1541.3	1571.3
35°	1379.3	1365.9	1373.2	1378.7	1383.6	1399.5	1436.2	1463.1
37.5°	1302.3	1299.8	1309.6	1316.3	1318.8	1326.7	1340.8	1337.1
40°	1234.4	1236.2	1244.8	1252.1	1257.0	1257.6	1249.1	1242.4
42.5°	1173.3	1181.2	1181.2	1190.4	1199.0	1187.3	1169.6	1174.5
45°	1110.9	1123.7	1123.1	1131.1	1139.0	1118.9	1104.2	1107.9
47.5°	1037.5	1062.0	1065.7	1074.2	1074.2	1053.4	1041.8	1037.5
50°	963.0	994.7	999.0	1003.9	1001.5	993.5	978.2	967.8
52.5°	893.9	923.8	928.1	926.3	931.2	934.8	914.0	901.2
55°	826.0	849.2	854.7	848.6	860.2	870.6	851.1	839.4
57.5°	758.7	776.5	781.4	776.5	789.3	800.9	788.1	780.1
60°	690.9	706.8	709.8	705.6	720.8	731.2	725.1	720.2
62.5°	624.2	635.2	638.3	640.1	649.3	661.5	660.3	659.7
65°	557.0	568.6	569.8	575.3	581.4	597.3	594.3	594.3
67.5°	491.6	499.5	501.3	509.9	512.4	527.6	525.8	523.4
70°	423.7	431.6	434.1	442.7	446.3	458.5	459.2	457.3
72.5°	361.3	364.4	366.8	374.8	377.8	389.5	389.5	387.0
75°	297.8	297.1	299.6	307.5	310.6	320.4	319.8	316.7
77.5°	237.8	234.8	236.6	242.1	245.8	253.1	250.7	248.2
80°	181.6	176.7	177.3	182.8	185.3	190.1	187.7	185.9
82.5°	128.4	124.1	122.9	127.2	130.8	131.5	130.8	129.6
85°	78.3	74.6	75.2	77.0	79.5	79.5	80.7	80.7
87.5°	30.6	28.7	28.7	30.6	30.6	31.2	30.6	29.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)