

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: P241238

Luminaire Tested: **1800-X-80-L40-3-M-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241238  
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-L40-3-M-UNV-STD-X-X  
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT  
MEDIUM DISTRIBUTION.  
Light Source: (168) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6781.3 lumens  
Efficiency: N/A  
Efficacy: 96.1 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

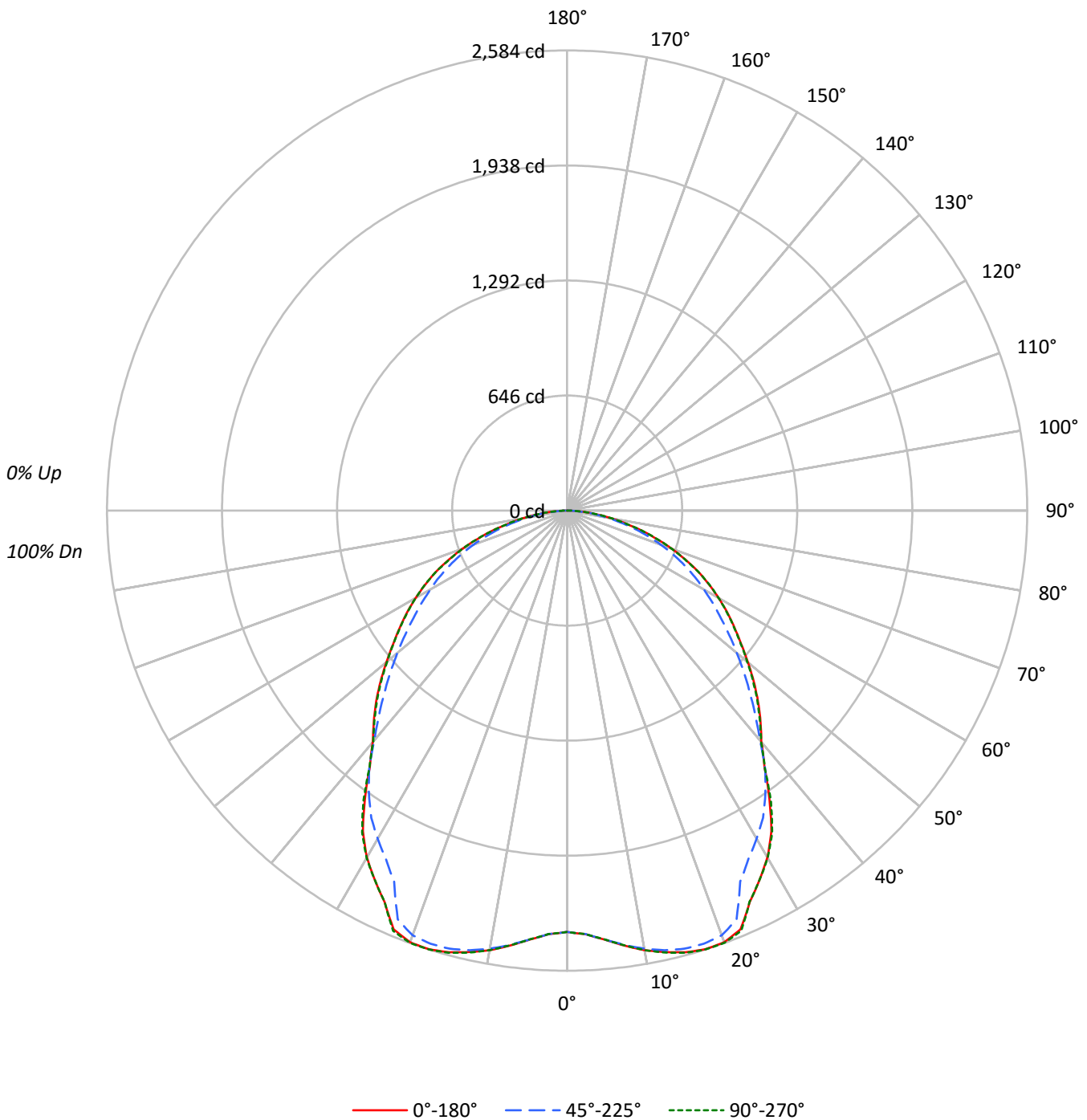
Input Watts (W): 70.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	23819	23819	23819
5°	24441	24441	24433
10°	25627	25541	25627
15°	26762	26554	26797
20°	27644	27197	27680
25°	26957	25541	26929
30°	26157	24740	26186
35°	24353	23860	24526
40°	22303	22139	22270
45°	21586	20696	21515
50°	20754	19501	20676
55°	20141	18517	20097
60°	19780	17866	19780
65°	19370	17323	19310
70°	18385	16472	18362
75°	16740	15149	16802
80°	14647	13296	14699
85°	12720	11079	12720



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	233.6	3.4
10°-20°	724.0	10.7
20°-30°	1094.9	16.1
30°-40°	1195.2	17.6
40°-50°	1173.2	17.3
50°-60°	1027.1	15.1
60°-70°	771.8	11.4
70°-80°	441.2	6.5
80°-90°	120.3	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°	2052.4	30.3
0°-40°	3247.6	47.9
0°-60°	5447.9	80.3
0°-90°	6781.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6781.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2366	2366	2366	2366	2366	
5°	2418	2418	2418	2418	2417	234
15°	2567	2565	2547	2566	2571	726
25°	2426	2430	2299	2429	2424	1120
35°	1981	1884	1941	1877	1995	1235
45°	1516	1547	1453	1537	1511	1169
55°	1147	1165	1055	1162	1145	1029
65°	813	781	727	781	810	800
75°	430	414	389	414	432	457
85°	110	103	96	104	110	123
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°	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6
2.5°	2381.4	2379.7	2380.6	2379.7	2381.4	2381.4	2380.6	2381.4	2380.6	2380.6	2380.6
5°	2418.1	2416.4	2417.3	2415.6	2418.1	2418.9	2418.1	2418.9	2418.9	2418.1	2418.1
7.5°	2464.0	2460.6	2461.5	2459.8	2462.3	2462.3	2461.5	2461.5	2460.6	2459.8	2460.6
10°	2506.5	2504.8	2504.8	2504.0	2505.6	2504.8	2503.1	2502.3	2499.0	2498.1	2499.8
12.5°	2539.0	2540.7	2543.2	2543.2	2542.3	2541.5	2537.3	2534.8	2529.8	2529.0	2530.7
15°	2567.3	2568.2	2570.7	2569.8	2567.3	2563.2	2559.0	2554.0	2549.8	2547.3	2549.8
17.5°	2582.4	2582.4	2581.5	2579.0	2574.0	2569.0	2563.2	2558.2	2554.0	2550.7	2554.0
20°	2579.9	2579.9	2575.7	2570.7	2562.3	2554.8	2549.0	2544.0	2539.8	2538.2	2540.7
22.5°	2544.8	2547.3	2544.0	2543.2	2536.5	2526.5	2514.8	2502.3	2489.0	2484.8	2490.6
25°	2426.4	2424.8	2426.4	2442.3	2446.4	2413.1	2370.6	2331.4	2308.0	2298.9	2311.4
27.5°	2338.9	2337.2	2316.4	2283.0	2237.2	2215.5	2218.8	2215.5	2209.6	2205.5	2211.3
30°	2249.7	2237.2	2180.5	2119.6	2075.4	2068.7	2087.9	2112.1	2127.1	2127.9	2125.4
32.5°	2134.6	2109.6	2036.2	1989.5	1971.2	1967.8	1973.7	1998.7	2032.9	2046.2	2028.7
35°	1981.2	1967.0	1922.0	1891.9	1886.1	1881.9	1871.9	1884.4	1927.0	1941.1	1925.3
37.5°	1821.9	1835.2	1816.1	1805.2	1804.4	1796.1	1781.9	1783.6	1806.1	1826.1	1803.6
40°	1696.8	1710.2	1722.7	1721.8	1718.5	1706.0	1695.2	1689.3	1687.7	1684.3	1689.3
42.5°	1607.6	1602.6	1626.8	1640.1	1631.8	1623.5	1614.3	1610.1	1579.3	1565.1	1583.4
45°	1515.9	1514.2	1530.9	1559.3	1552.6	1540.9	1538.4	1521.7	1469.2	1453.4	1473.4
47.5°	1421.7	1428.3	1443.4	1466.7	1470.9	1460.9	1453.4	1419.2	1365.8	1346.6	1365.0
50°	1324.9	1340.0	1360.8	1370.0	1374.1	1368.3	1363.3	1319.1	1264.9	1244.9	1265.7
52.5°	1232.4	1253.2	1280.8	1273.3	1269.9	1272.4	1264.1	1224.1	1171.5	1147.3	1172.4
55°	1147.3	1167.4	1191.5	1176.5	1160.7	1169.9	1162.4	1130.7	1084.8	1054.8	1083.1
57.5°	1067.3	1079.8	1099.0	1079.0	1060.6	1071.5	1064.0	1038.9	996.4	970.6	998.1
60°	982.2	992.3	1003.1	983.9	964.7	970.6	967.2	944.7	909.7	887.2	908.0
62.5°	897.2	902.2	909.7	888.9	873.0	873.0	871.3	849.7	822.2	809.6	821.3
65°	813.0	812.1	814.6	793.8	782.1	780.5	777.1	757.1	735.4	727.1	736.3
67.5°	717.9	719.6	720.4	701.2	692.1	687.9	685.4	667.1	649.5	643.7	650.4
70°	624.5	625.4	625.4	607.9	601.2	594.5	592.0	577.8	563.7	559.5	565.3
72.5°	526.1	532.0	529.5	515.3	510.3	502.0	500.3	491.1	480.3	474.4	480.3
75°	430.3	438.6	436.1	423.6	417.7	409.4	410.2	405.2	393.6	389.4	395.2
77.5°	337.7	342.7	343.5	336.9	327.7	321.9	324.4	323.5	315.2	305.2	312.7
80°	252.6	258.5	259.3	253.5	246.0	241.0	244.3	244.3	237.6	229.3	236.0
82.5°	175.9	180.1	180.1	176.8	173.4	168.4	170.1	170.9	166.8	158.4	164.3
85°	110.1	110.9	109.2	106.7	104.2	102.6	102.6	104.2	100.9	95.9	100.1
87.5°	40.9	41.7	40.9	43.4	40.9	40.0	40.9	43.4	40.0	40.0	40.9
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°	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6	2365.6
2.5°	2380.6	2381.4	2381.4	2380.6	2380.6	2380.6	2379.7	2380.6
5°	2418.1	2418.9	2418.9	2417.3	2418.1	2417.3	2416.4	2417.3
7.5°	2461.5	2463.1	2462.3	2463.1	2464.0	2462.3	2462.3	2462.3
10°	2501.5	2504.0	2505.6	2507.3	2508.1	2506.5	2507.3	2506.5
12.5°	2534.0	2539.0	2542.3	2544.0	2545.7	2545.7	2544.0	2542.3
15°	2554.0	2559.8	2564.0	2569.0	2572.3	2573.2	2571.5	2570.7
17.5°	2559.0	2564.0	2569.8	2574.9	2579.9	2583.2	2584.9	2584.0
20°	2544.8	2549.0	2555.7	2563.2	2569.8	2576.5	2581.5	2583.2
22.5°	2504.0	2515.6	2528.2	2537.3	2543.2	2546.5	2549.0	2554.8
25°	2336.4	2367.2	2412.3	2446.4	2440.6	2424.8	2418.9	2423.9
27.5°	2217.1	2213.8	2208.8	2235.5	2277.2	2313.9	2331.4	2339.7
30°	2110.4	2085.4	2062.0	2071.2	2113.7	2177.1	2230.5	2252.2
32.5°	1998.7	1964.5	1961.2	1967.0	1987.0	2029.5	2102.1	2142.9
35°	1881.1	1862.8	1872.8	1880.3	1886.9	1908.6	1958.7	1995.3
37.5°	1776.0	1772.7	1786.1	1795.2	1798.6	1809.4	1828.6	1823.6
40°	1683.5	1686.0	1697.7	1707.7	1714.3	1715.2	1703.5	1694.3
42.5°	1600.1	1610.9	1610.9	1623.5	1635.1	1619.3	1595.1	1601.8
45°	1515.1	1532.6	1531.7	1542.6	1553.4	1525.9	1505.9	1510.9
47.5°	1415.0	1448.4	1453.4	1465.0	1465.0	1436.7	1420.8	1415.0
50°	1313.3	1356.6	1362.5	1369.1	1365.8	1355.0	1334.1	1319.9
52.5°	1219.1	1259.9	1265.7	1263.2	1269.9	1274.9	1246.6	1229.1
55°	1126.5	1158.2	1165.7	1157.3	1173.2	1187.4	1160.7	1144.8
57.5°	1034.8	1059.0	1065.6	1059.0	1076.5	1092.3	1074.8	1064.0
60°	942.2	963.9	968.1	962.2	983.1	997.3	988.9	982.2
62.5°	851.3	866.3	870.5	873.0	885.5	902.2	900.5	899.7
65°	759.6	775.5	777.1	784.6	793.0	814.6	810.5	810.5
67.5°	670.4	681.2	683.7	695.4	698.7	719.6	717.1	713.8
70°	577.8	588.7	592.0	603.7	608.7	625.4	626.2	623.7
72.5°	492.8	497.0	500.3	511.1	515.3	531.1	531.1	527.8
75°	406.1	405.2	408.6	419.4	423.6	436.9	436.1	431.9
77.5°	324.4	320.2	322.7	330.2	335.2	345.2	341.9	338.5
80°	247.6	241.0	241.8	249.3	252.6	259.3	256.0	253.5
82.5°	175.1	169.3	167.6	173.4	178.4	179.3	178.4	176.8
85°	106.7	101.7	102.6	105.1	108.4	108.4	110.1	110.1
87.5°	41.7	39.2	39.2	41.7	41.7	42.5	41.7	40.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)