

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: P241218

Luminaire Tested: **1800-X-80-L30-1-M-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241218  
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-L30-1-M-UNV-STD-X-X  
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT  
MEDIUM DISTRIBUTION.  
Light Source: (168) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4350.2 lumens  
Efficiency: N/A  
Efficacy: 104.1 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

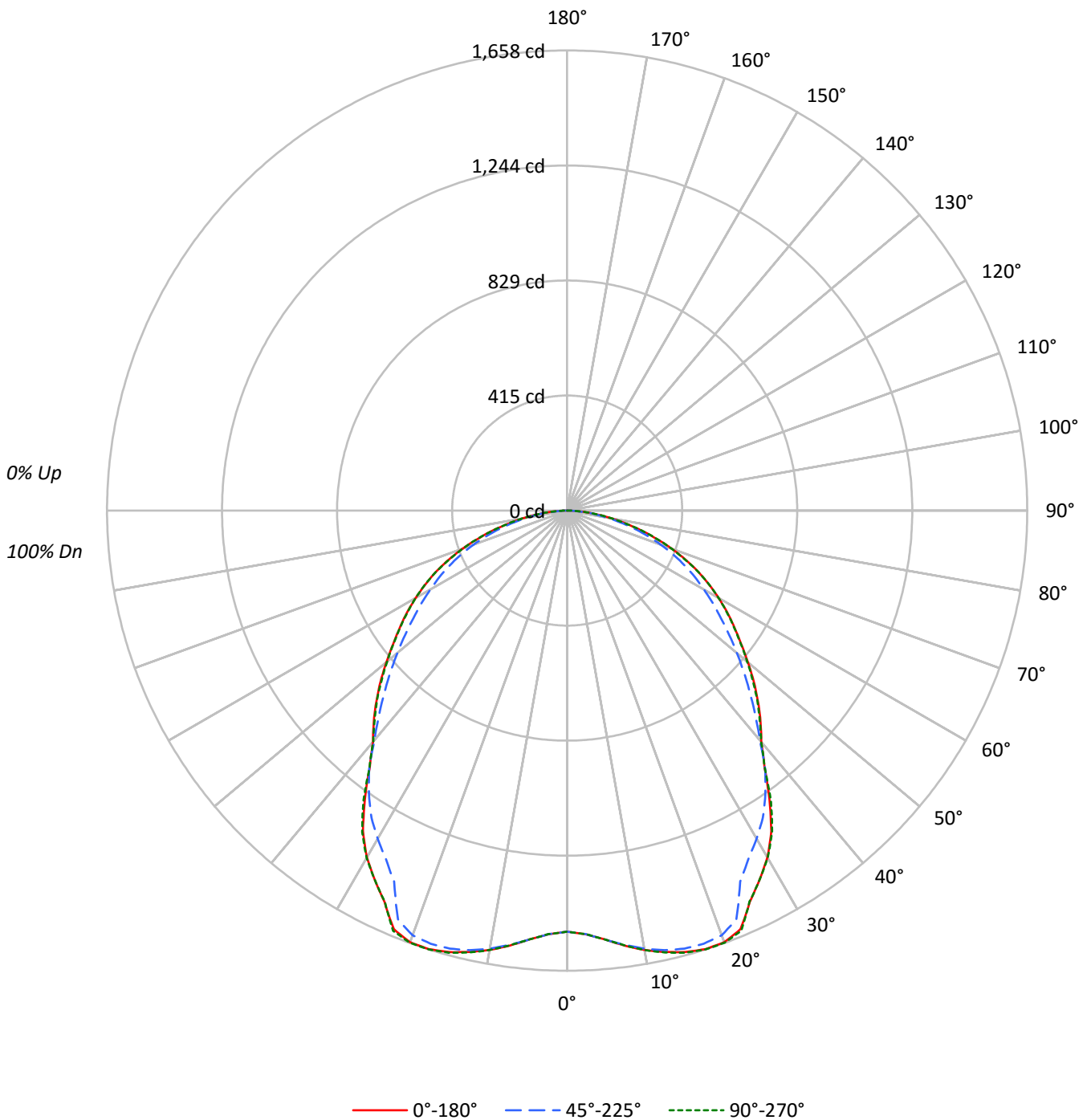
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	15280	15280	15280
5°	15679	15679	15674
10°	16440	16384	16440
15°	17168	17034	17191
20°	17734	17447	17756
25°	17293	16384	17275
30°	16778	15870	16797
35°	15622	15306	15734
40°	14307	14202	14286
45°	13847	13276	13801
50°	13313	12510	13263
55°	12920	11878	12892
60°	12689	11461	12689
65°	12425	11112	12387
70°	11794	10566	11779
75°	10737	9718	10780
80°	9399	8530	9428
85°	8156	7105	8156



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.8	3.4
10°-20°	464.4	10.7
20°-30°	702.3	16.1
30°-40°	766.7	17.6
40°-50°	752.6	17.3
50°-60°	658.9	15.1
60°-70°	495.1	11.4
70°-80°	283.1	6.5
80°-90°	77.2	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°	1316.6	30.3
0°-40°	2083.3	47.9
0°-60°	3494.8	80.3
0°-90°	4350.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4350.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1518	1518	1518	1518	1518	
5°	1551	1551	1551	1551	1551	150
15°	1647	1646	1634	1646	1649	466
25°	1556	1559	1475	1558	1555	719
35°	1271	1209	1245	1204	1280	792
45°	972	992	932	986	969	750
55°	736	748	677	745	734	660
65°	522	501	466	501	520	513
75°	276	265	250	266	277	293
85°	71	66	62	67	71	79
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°	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5
2.5°	1527.7	1526.6	1527.1	1526.6	1527.7	1527.7	1527.1	1527.7	1527.1	1527.1	1527.1
5°	1551.2	1550.1	1550.7	1549.6	1551.2	1551.7	1551.2	1551.7	1551.7	1551.2	1551.2
7.5°	1580.6	1578.5	1579.0	1577.9	1579.5	1579.5	1579.0	1579.0	1578.5	1577.9	1578.5
10°	1607.9	1606.8	1606.8	1606.3	1607.4	1606.8	1605.7	1605.2	1603.1	1602.5	1603.6
12.5°	1628.7	1629.8	1631.4	1631.4	1630.9	1630.4	1627.7	1626.1	1622.9	1622.3	1623.4
15°	1646.9	1647.5	1649.1	1648.5	1646.9	1644.3	1641.6	1638.4	1635.7	1634.1	1635.7
17.5°	1656.6	1656.6	1656.0	1654.4	1651.2	1648.0	1644.3	1641.1	1638.4	1636.2	1638.4
20°	1655.0	1655.0	1652.3	1649.1	1643.7	1638.9	1635.2	1632.0	1629.3	1628.2	1629.8
22.5°	1632.5	1634.1	1632.0	1631.4	1627.1	1620.7	1613.2	1605.2	1596.7	1594.0	1597.7
25°	1556.5	1555.5	1556.5	1566.7	1569.4	1548.0	1520.7	1495.6	1480.6	1474.7	1482.7
27.5°	1500.4	1499.3	1485.9	1464.5	1435.1	1421.2	1423.3	1421.2	1417.5	1414.8	1418.5
30°	1443.1	1435.1	1398.7	1359.7	1331.3	1327.1	1339.4	1354.9	1364.5	1365.0	1363.4
32.5°	1369.3	1353.3	1306.2	1276.3	1264.5	1262.3	1266.1	1282.1	1304.1	1312.6	1301.4
35°	1270.9	1261.8	1232.9	1213.7	1209.9	1207.3	1200.8	1208.9	1236.1	1245.2	1235.1
37.5°	1168.7	1177.3	1165.0	1158.0	1157.5	1152.2	1143.1	1144.1	1158.6	1171.4	1157.0
40°	1088.5	1097.1	1105.1	1104.6	1102.4	1094.4	1087.4	1083.7	1082.6	1080.5	1083.7
42.5°	1031.3	1028.1	1043.6	1052.1	1046.8	1041.4	1035.6	1032.9	1013.1	1004.0	1015.8
45°	972.4	971.4	982.1	1000.2	996.0	988.5	986.9	976.2	942.5	932.3	945.2
47.5°	912.0	916.3	925.9	940.9	943.6	937.1	932.3	910.4	876.2	863.9	875.6
50°	849.9	859.6	872.9	878.8	881.5	877.8	874.5	846.2	811.4	798.6	812.0
52.5°	790.6	803.9	821.6	816.8	814.6	816.2	810.9	785.2	751.5	736.0	752.1
55°	736.0	748.8	764.4	754.7	744.6	750.5	745.6	725.3	695.9	676.6	694.8
57.5°	684.7	692.7	705.0	692.2	680.4	687.3	682.5	666.5	639.2	622.6	640.3
60°	630.1	636.5	643.5	631.2	618.9	622.6	620.5	606.0	583.6	569.1	582.5
62.5°	575.5	578.8	583.6	570.2	560.0	560.0	559.0	545.1	527.4	519.4	526.9
65°	521.5	521.0	522.6	509.2	501.7	500.7	498.5	485.7	471.8	466.4	472.3
67.5°	460.5	461.6	462.1	449.8	444.0	441.3	439.7	427.9	416.7	412.9	417.2
70°	400.6	401.2	401.2	389.9	385.7	381.4	379.8	370.7	361.6	358.9	362.7
72.5°	337.5	341.3	339.7	330.6	327.4	322.0	320.9	315.1	308.1	304.4	308.1
75°	276.0	281.4	279.7	271.7	268.0	262.6	263.2	260.0	252.5	249.8	253.5
77.5°	216.6	219.8	220.4	216.1	210.2	206.5	208.1	207.5	202.2	195.8	200.6
80°	162.1	165.8	166.4	162.6	157.8	154.6	156.7	156.7	152.4	147.1	151.4
82.5°	112.9	115.5	115.5	113.4	111.3	108.0	109.1	109.7	107.0	101.6	105.4
85°	70.6	71.1	70.1	68.5	66.9	65.8	65.8	66.9	64.7	61.5	64.2
87.5°	26.2	26.7	26.2	27.8	26.2	25.7	26.2	27.8	25.7	25.7	26.2
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°	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5	1517.5
2.5°	1527.1	1527.7	1527.7	1527.1	1527.1	1527.1	1526.6	1527.1
5°	1551.2	1551.7	1551.7	1550.7	1551.2	1550.7	1550.1	1550.7
7.5°	1579.0	1580.1	1579.5	1580.1	1580.6	1579.5	1579.5	1579.5
10°	1604.7	1606.3	1607.4	1608.4	1609.0	1607.9	1608.4	1607.9
12.5°	1625.5	1628.7	1630.9	1632.0	1633.0	1633.0	1632.0	1630.9
15°	1638.4	1642.1	1644.8	1648.0	1650.1	1650.7	1649.6	1649.1
17.5°	1641.6	1644.8	1648.5	1651.7	1655.0	1657.1	1658.2	1657.6
20°	1632.5	1635.2	1639.4	1644.3	1648.5	1652.8	1656.0	1657.1
22.5°	1606.3	1613.8	1621.8	1627.7	1631.4	1633.6	1635.2	1638.9
25°	1498.8	1518.6	1547.4	1569.4	1565.6	1555.5	1551.7	1554.9
27.5°	1422.3	1420.1	1416.9	1434.0	1460.8	1484.3	1495.6	1500.9
30°	1353.8	1337.8	1322.8	1328.7	1356.0	1396.6	1430.8	1444.7
32.5°	1282.1	1260.2	1258.1	1261.8	1274.6	1301.9	1348.5	1374.7
35°	1206.7	1195.0	1201.4	1206.2	1210.5	1224.4	1256.5	1280.0
37.5°	1139.3	1137.2	1145.7	1151.6	1153.8	1160.7	1173.0	1169.8
40°	1079.9	1081.6	1089.0	1095.5	1099.7	1100.3	1092.8	1086.9
42.5°	1026.5	1033.4	1033.4	1041.4	1048.9	1038.8	1023.2	1027.5
45°	971.9	983.1	982.6	989.6	996.5	978.9	966.0	969.2
47.5°	907.7	929.1	932.3	939.8	939.8	921.6	911.5	907.7
50°	842.5	870.3	874.0	878.3	876.2	869.2	855.8	846.7
52.5°	782.0	808.2	812.0	810.4	814.6	817.9	799.7	788.4
55°	722.6	743.0	747.8	742.4	752.6	761.7	744.6	734.4
57.5°	663.8	679.3	683.6	679.3	690.5	700.7	689.5	682.5
60°	604.4	618.3	621.0	617.3	630.6	639.7	634.4	630.1
62.5°	546.1	555.8	558.4	560.0	568.1	578.8	577.7	577.1
65°	487.3	497.5	498.5	503.3	508.7	522.6	519.9	519.9
67.5°	430.1	437.0	438.6	446.1	448.2	461.6	460.0	457.9
70°	370.7	377.6	379.8	387.3	390.5	401.2	401.7	400.1
72.5°	316.1	318.8	320.9	327.9	330.6	340.7	340.7	338.6
75°	260.5	260.0	262.1	269.1	271.7	280.3	279.7	277.1
77.5°	208.1	205.4	207.0	211.8	215.0	221.4	219.3	217.2
80°	158.9	154.6	155.1	159.9	162.1	166.4	164.2	162.6
82.5°	112.3	108.6	107.5	111.3	114.5	115.0	114.5	113.4
85°	68.5	65.3	65.8	67.4	69.5	69.5	70.6	70.6
87.5°	26.7	25.1	25.1	26.7	26.7	27.3	26.7	25.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)