

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: P241220

Luminaire Tested: **1800-X-80-L35-1-M-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241220  
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-L35-1-M-UNV-STD-X-X  
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT  
MEDIUM DISTRIBUTION.  
Light Source: (168) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

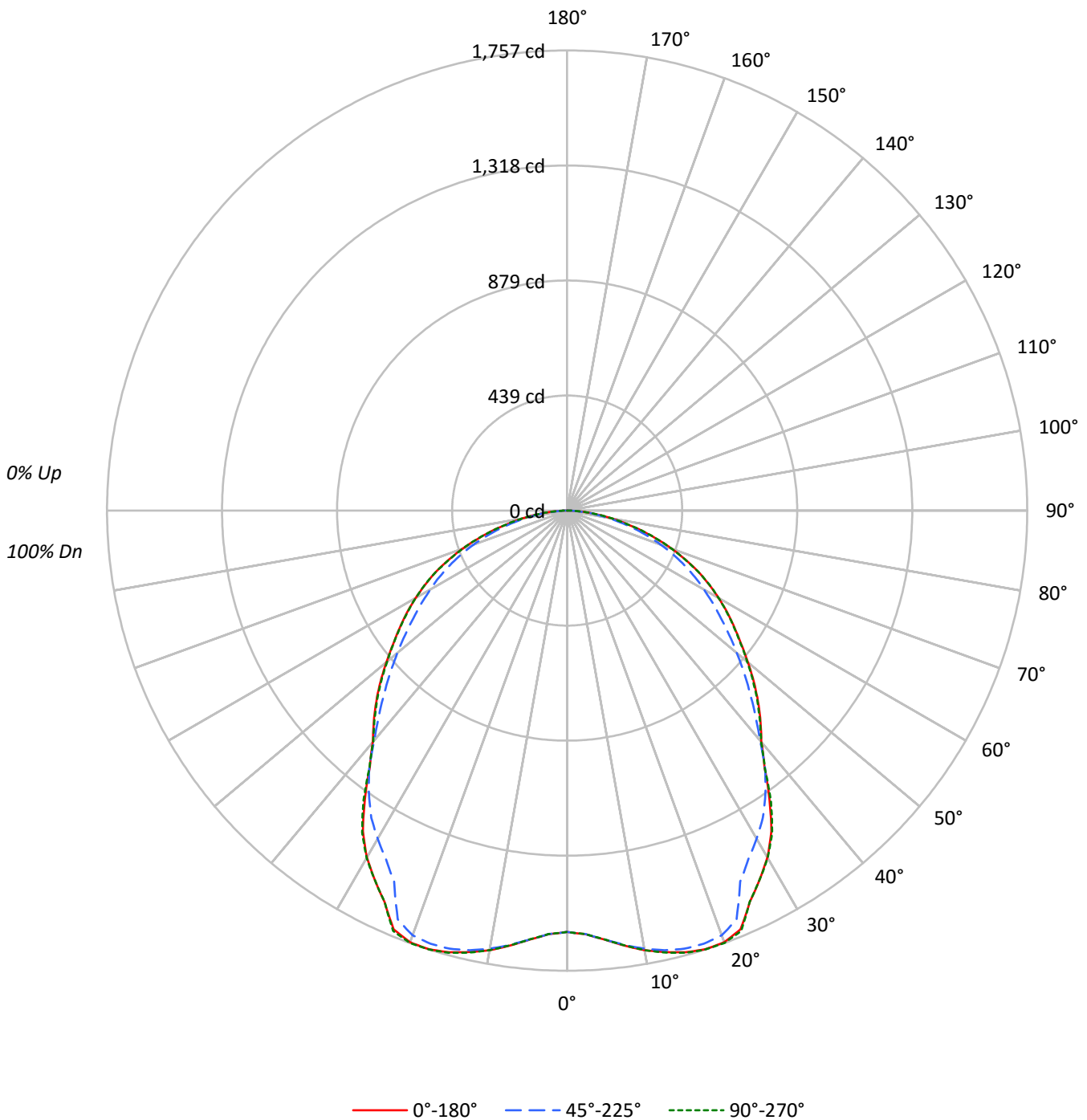
Lumens per Lamp: N/A  
Luminaire Lumens: 4611.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33  
Luminous Opening: Circular (Dia: 1.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	16196	16196	16196
5°	16619	16619	16613
10°	17425	17367	17425
15°	18198	18056	18222
20°	18797	18492	18821
25°	18330	17366	18311
30°	17785	16823	17805
35°	16559	16224	16677
40°	15166	15054	15143
45°	14677	14072	14628
50°	14112	13260	14059
55°	13694	12590	13665
60°	13450	12149	13450
65°	13171	11779	13130
70°	12503	11199	12485
75°	11383	10302	11426
80°	9962	9040	9997
85°	8642	7532	8642



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.8	3.4
10°-20°	492.3	10.7
20°-30°	744.5	16.1
30°-40°	812.7	17.6
40°-50°	797.8	17.3
50°-60°	698.4	15.1
60°-70°	524.8	11.4
70°-80°	300.0	6.5
80°-90°	81.8	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°	1395.6	30.3
0°-40°	2208.2	47.9
0°-60°	3704.4	80.3
0°-90°	4611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4611.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1608	1608	1608	1608	1608	
5°	1644	1644	1644	1644	1644	159
15°	1746	1744	1732	1745	1748	494
25°	1650	1652	1563	1652	1648	762
35°	1347	1281	1320	1276	1357	840
45°	1031	1052	988	1045	1027	795
55°	780	792	717	790	778	700
65°	553	531	494	531	551	544
75°	293	281	265	282	294	311
85°	75	70	65	71	75	84
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°	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5
2.5°	1619.3	1618.1	1618.7	1618.1	1619.3	1619.3	1618.7	1619.3	1618.7	1618.7	1618.7
5°	1644.2	1643.1	1643.6	1642.5	1644.2	1644.8	1644.2	1644.8	1644.8	1644.2	1644.2
7.5°	1675.4	1673.1	1673.7	1672.5	1674.2	1674.2	1673.7	1673.7	1673.1	1672.5	1673.1
10°	1704.3	1703.2	1703.2	1702.6	1703.7	1703.2	1702.0	1701.5	1699.2	1698.6	1699.8
12.5°	1726.4	1727.5	1729.2	1729.2	1728.7	1728.1	1725.3	1723.6	1720.2	1719.6	1720.7
15°	1745.7	1746.3	1748.0	1747.4	1745.7	1742.8	1740.0	1736.6	1733.8	1732.1	1733.8
17.5°	1755.9	1755.9	1755.3	1753.6	1750.2	1746.8	1742.8	1739.4	1736.6	1734.3	1736.6
20°	1754.2	1754.2	1751.4	1748.0	1742.3	1737.2	1733.2	1729.8	1727.0	1725.8	1727.5
22.5°	1730.4	1732.1	1729.8	1729.2	1724.7	1717.9	1710.0	1701.5	1692.4	1689.6	1693.5
25°	1649.9	1648.7	1649.9	1660.6	1663.5	1640.8	1611.9	1585.2	1569.4	1563.1	1571.6
27.5°	1590.3	1589.2	1575.0	1552.3	1521.2	1506.4	1508.7	1506.4	1502.5	1499.6	1503.6
30°	1529.7	1521.2	1482.6	1441.2	1411.2	1406.6	1419.7	1436.1	1446.3	1446.9	1445.2
32.5°	1451.4	1434.4	1384.5	1352.8	1340.3	1338.0	1342.0	1359.0	1382.3	1391.3	1379.4
35°	1347.1	1337.5	1306.9	1286.4	1282.5	1279.6	1272.8	1281.3	1310.3	1319.9	1309.1
37.5°	1238.8	1247.9	1234.8	1227.5	1226.9	1221.2	1211.6	1212.7	1228.0	1241.7	1226.3
40°	1153.8	1162.8	1171.3	1170.8	1168.5	1160.0	1152.6	1148.7	1147.5	1145.3	1148.7
42.5°	1093.1	1089.7	1106.1	1115.2	1109.5	1103.9	1097.6	1094.8	1073.8	1064.2	1076.7
45°	1030.7	1029.6	1040.9	1060.2	1055.7	1047.8	1046.0	1034.7	999.0	988.2	1001.8
47.5°	966.7	971.2	981.4	997.3	1000.1	993.3	988.2	965.0	928.7	915.6	928.1
50°	900.9	911.1	925.3	931.5	934.4	930.4	927.0	896.9	860.1	846.5	860.7
52.5°	838.0	852.1	870.9	865.8	863.5	865.2	859.5	832.3	796.6	780.1	797.2
55°	780.1	793.8	810.2	800.0	789.2	795.5	790.3	768.8	737.6	717.2	736.5
57.5°	725.7	734.2	747.3	733.7	721.2	728.5	723.4	706.4	677.5	659.9	678.7
60°	667.9	674.7	682.1	669.0	656.0	659.9	657.7	642.4	618.6	603.3	617.4
62.5°	610.1	613.5	618.6	604.4	593.6	593.6	592.5	577.7	559.0	550.5	558.5
65°	552.8	552.2	553.9	539.8	531.8	530.7	528.4	514.8	500.1	494.4	500.6
67.5°	488.2	489.3	489.9	476.8	470.6	467.7	466.0	453.6	441.7	437.7	442.2
70°	424.7	425.2	425.2	413.3	408.8	404.2	402.5	392.9	383.3	380.4	384.4
72.5°	357.8	361.7	360.0	350.4	347.0	341.3	340.2	333.9	326.6	322.6	326.6
75°	292.6	298.2	296.5	288.0	284.0	278.4	278.9	275.5	267.6	264.8	268.7
77.5°	229.6	233.0	233.6	229.1	222.8	218.8	220.5	220.0	214.3	207.5	212.6
80°	171.8	175.8	176.3	172.4	167.3	163.9	166.1	166.1	161.6	155.9	160.5
82.5°	119.6	122.5	122.5	120.2	117.9	114.5	115.7	116.2	113.4	107.7	111.7
85°	74.8	75.4	74.3	72.6	70.9	69.7	69.7	70.9	68.6	65.2	68.0
87.5°	27.8	28.3	27.8	29.5	27.8	27.2	27.8	29.5	27.2	27.2	27.8
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°	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5	1608.5
2.5°	1618.7	1619.3	1619.3	1618.7	1618.7	1618.7	1618.1	1618.7
5°	1644.2	1644.8	1644.8	1643.6	1644.2	1643.6	1643.1	1643.6
7.5°	1673.7	1674.8	1674.2	1674.8	1675.4	1674.2	1674.2	1674.2
10°	1700.9	1702.6	1703.7	1704.9	1705.4	1704.3	1704.9	1704.3
12.5°	1723.0	1726.4	1728.7	1729.8	1730.9	1730.9	1729.8	1728.7
15°	1736.6	1740.6	1743.4	1746.8	1749.1	1749.7	1748.5	1748.0
17.5°	1740.0	1743.4	1747.4	1750.8	1754.2	1756.5	1757.6	1757.0
20°	1730.4	1733.2	1737.7	1742.8	1747.4	1751.9	1755.3	1756.5
22.5°	1702.6	1710.5	1719.0	1725.3	1729.2	1731.5	1733.2	1737.2
25°	1588.6	1609.6	1640.2	1663.5	1659.5	1648.7	1644.8	1648.2
27.5°	1507.6	1505.3	1501.9	1520.0	1548.4	1573.3	1585.2	1590.9
30°	1435.0	1418.0	1402.1	1408.3	1437.3	1480.3	1516.6	1531.4
32.5°	1359.0	1335.8	1333.5	1337.5	1351.1	1380.0	1429.3	1457.1
35°	1279.1	1266.6	1273.4	1278.5	1283.0	1297.8	1331.8	1356.7
37.5°	1207.6	1205.4	1214.4	1220.7	1222.9	1230.3	1243.4	1240.0
40°	1144.7	1146.4	1154.3	1161.1	1165.7	1166.2	1158.3	1152.1
42.5°	1088.0	1095.4	1095.4	1103.9	1111.8	1101.0	1084.6	1089.1
45°	1030.2	1042.1	1041.5	1048.9	1056.3	1037.5	1023.9	1027.3
47.5°	962.1	984.8	988.2	996.2	996.2	976.9	966.1	962.1
50°	893.0	922.5	926.4	931.0	928.7	921.3	907.1	897.5
52.5°	828.9	856.7	860.7	859.0	863.5	866.9	847.6	835.7
55°	766.0	787.5	792.6	786.9	797.7	807.4	789.2	778.4
57.5°	703.6	720.0	724.6	720.0	732.0	742.7	730.8	723.4
60°	640.7	655.4	658.2	654.3	668.5	678.1	672.4	667.9
62.5°	578.9	589.1	591.9	593.6	602.1	613.5	612.3	611.8
65°	516.5	527.3	528.4	533.5	539.2	553.9	551.1	551.1
67.5°	455.8	463.2	464.9	472.8	475.1	489.3	487.6	485.3
70°	392.9	400.3	402.5	410.5	413.9	425.2	425.8	424.1
72.5°	335.1	337.9	340.2	347.5	350.4	361.2	361.2	358.9
75°	276.1	275.5	277.8	285.2	288.0	297.1	296.5	293.7
77.5°	220.5	217.7	219.4	224.5	227.9	234.7	232.5	230.2
80°	168.4	163.9	164.4	169.5	171.8	176.3	174.1	172.4
82.5°	119.1	115.1	114.0	117.9	121.3	121.9	121.3	120.2
85°	72.6	69.2	69.7	71.4	73.7	73.7	74.8	74.8
87.5°	28.3	26.6	26.6	28.3	28.3	28.9	28.3	27.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)