

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: P241260

Luminaire Tested: **1800-X-90-L35-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241260
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-L35-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4485.3 lumens
Efficiency: N/A
Efficacy: 83.2 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

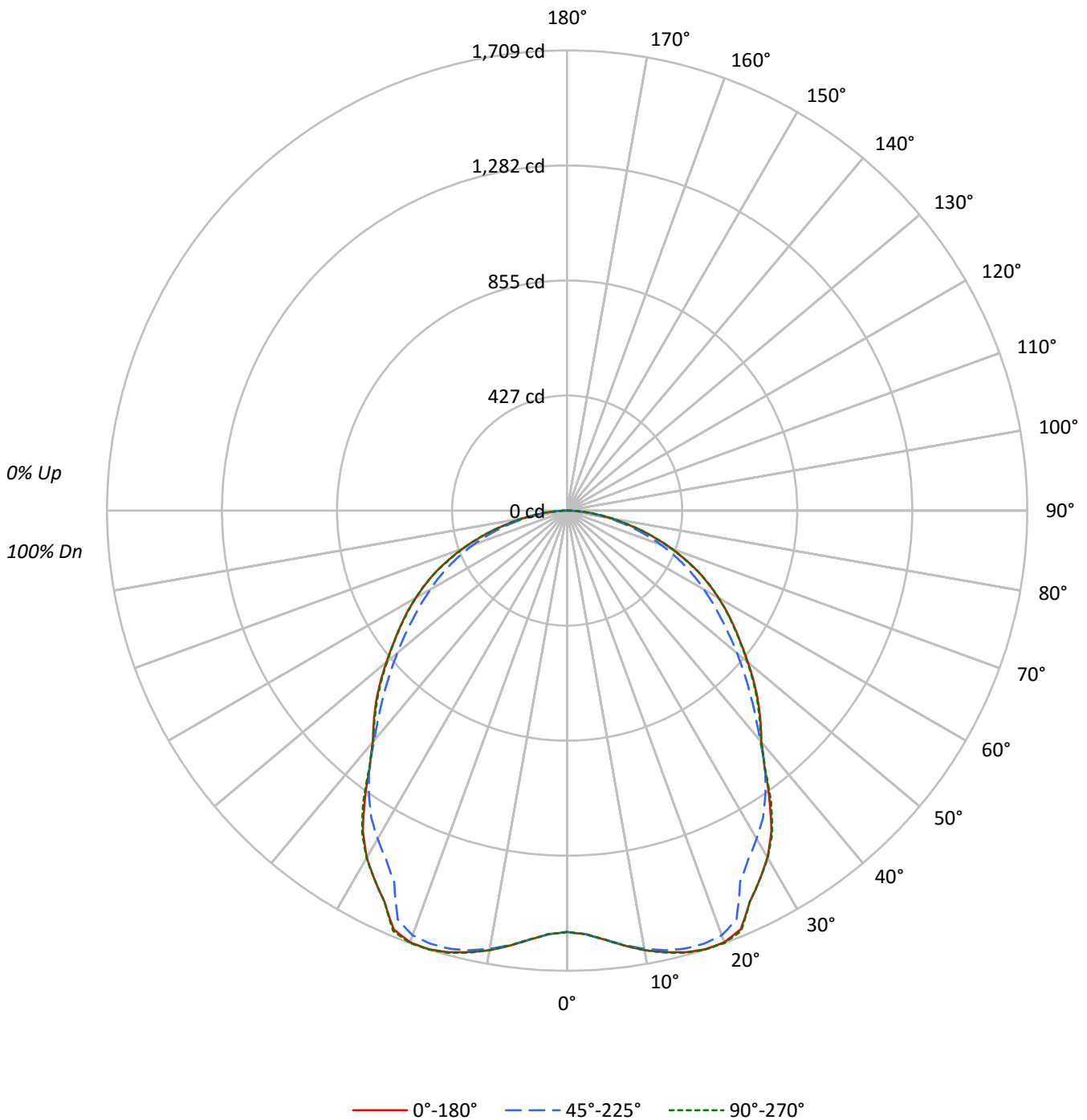
Input Watts (W): 53.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	15754	15754	15754
5°	16166	16166	16160
10°	16950	16894	16950
15°	17701	17563	17724
20°	18283	17989	18308
25°	17830	16893	17811
30°	17301	16363	17319
35°	16107	15782	16222
40°	14752	14643	14731
45°	14277	13689	14230
50°	13727	12898	13675
55°	13322	12248	13292
60°	13084	11817	13084
65°	12811	11458	12773
70°	12162	10896	12144
75°	11072	10022	11115
80°	9689	8796	9724
85°	8411	7325	8411



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.5	3.4
10°-20°	478.9	10.7
20°-30°	724.2	16.1
30°-40°	790.5	17.6
40°-50°	776.0	17.3
50°-60°	679.3	15.1
60°-70°	510.5	11.4
70°-80°	291.8	6.5
80°-90°	79.6	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°	1357.5	30.3
0°-40°	2148.0	47.9
0°-60°	3603.3	80.3
0°-90°	4485.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4485.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1599	1600	1599	1599	1599	155
15°	1698	1697	1685	1698	1700	480
25°	1605	1607	1520	1607	1603	741
35°	1310	1246	1284	1241	1320	817
45°	1003	1023	961	1017	999	773
55°	759	771	698	768	757	681
65°	538	517	481	516	536	529
75°	285	274	258	274	286	302
85°	73	68	63	69	73	82
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°	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6
2.5°	1575.1	1574.0	1574.5	1574.0	1575.1	1575.1	1574.5	1575.1	1574.5	1574.5	1574.5
5°	1599.4	1598.3	1598.8	1597.7	1599.4	1599.9	1599.4	1599.9	1599.9	1599.4	1599.4
7.5°	1629.7	1627.5	1628.0	1626.9	1628.6	1628.6	1628.0	1628.0	1627.5	1626.9	1627.5
10°	1657.8	1656.7	1656.7	1656.2	1657.3	1656.7	1655.6	1655.1	1652.9	1652.3	1653.4
12.5°	1679.3	1680.4	1682.1	1682.1	1681.5	1681.0	1678.2	1676.6	1673.3	1672.7	1673.8
15°	1698.1	1698.6	1700.3	1699.7	1698.1	1695.3	1692.6	1689.3	1686.5	1684.8	1686.5
17.5°	1708.0	1708.0	1707.5	1705.8	1702.5	1699.2	1695.3	1692.0	1689.3	1687.0	1689.3
20°	1706.3	1706.3	1703.6	1700.3	1694.8	1689.8	1685.9	1682.6	1679.9	1678.8	1680.4
22.5°	1683.2	1684.8	1682.6	1682.1	1677.7	1671.1	1663.3	1655.1	1646.2	1643.5	1647.3
25°	1604.9	1603.8	1604.9	1615.4	1618.1	1596.0	1567.9	1542.0	1526.6	1520.5	1528.8
27.5°	1547.0	1545.9	1532.1	1510.0	1479.7	1465.3	1467.5	1465.3	1461.5	1458.7	1462.6
30°	1488.0	1479.7	1442.2	1401.9	1372.7	1368.3	1381.0	1397.0	1406.9	1407.4	1405.8
32.5°	1411.8	1395.3	1346.8	1315.9	1303.8	1301.5	1305.4	1322.0	1344.6	1353.4	1341.8
35°	1310.4	1301.0	1271.2	1251.4	1247.5	1244.7	1238.1	1246.4	1274.5	1283.9	1273.4
37.5°	1205.0	1213.9	1201.2	1194.0	1193.5	1187.9	1178.6	1179.7	1194.6	1207.8	1192.9
40°	1122.3	1131.1	1139.4	1138.9	1136.6	1128.4	1121.2	1117.3	1116.2	1114.0	1117.3
42.5°	1063.3	1060.0	1076.0	1084.8	1079.3	1073.8	1067.7	1065.0	1044.5	1035.2	1047.3
45°	1002.6	1001.5	1012.6	1031.3	1026.9	1019.2	1017.5	1006.5	971.7	961.3	974.5
47.5°	940.3	944.7	954.7	970.1	972.9	966.2	961.3	938.7	903.4	890.7	902.8
50°	876.3	886.3	900.1	906.1	908.9	905.0	901.7	872.5	836.6	823.4	837.2
52.5°	815.1	828.9	847.1	842.1	839.9	841.6	836.1	809.6	774.9	758.9	775.4
55°	758.9	772.1	788.1	778.2	767.7	773.8	768.8	747.8	717.5	697.7	716.4
57.5°	705.9	714.2	726.9	713.6	701.5	708.7	703.7	687.2	659.0	641.9	660.1
60°	649.7	656.3	663.5	650.8	638.1	641.9	639.7	624.9	601.7	586.8	600.6
62.5°	593.4	596.7	601.7	587.9	577.4	577.4	576.3	562.0	543.8	535.5	543.2
65°	537.7	537.2	538.8	525.0	517.3	516.2	514.0	500.8	486.4	480.9	487.0
67.5°	474.8	475.9	476.5	463.8	457.7	455.0	453.3	441.2	429.6	425.8	430.2
70°	413.1	413.6	413.6	402.0	397.6	393.2	391.6	382.2	372.8	370.1	373.9
72.5°	348.0	351.9	350.2	340.8	337.5	332.0	330.9	324.8	317.7	313.8	317.7
75°	284.6	290.1	288.4	280.2	276.3	270.8	271.3	268.0	260.3	257.6	261.4
77.5°	223.4	226.7	227.2	222.8	216.7	212.9	214.5	214.0	208.5	201.8	206.8
80°	167.1	171.0	171.5	167.7	162.7	159.4	161.6	161.6	157.2	151.7	156.1
82.5°	116.4	119.1	119.1	116.9	114.7	111.4	112.5	113.1	110.3	104.8	108.6
85°	72.8	73.3	72.2	70.6	68.9	67.8	67.8	68.9	66.7	63.4	66.2
87.5°	27.0	27.6	27.0	28.7	27.0	26.5	27.0	28.7	26.5	26.5	27.0
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°	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6	1564.6
2.5°	1574.5	1575.1	1575.1	1574.5	1574.5	1574.5	1574.0	1574.5
5°	1599.4	1599.9	1599.9	1598.8	1599.4	1598.8	1598.3	1598.8
7.5°	1628.0	1629.1	1628.6	1629.1	1629.7	1628.6	1628.6	1628.6
10°	1654.5	1656.2	1657.3	1658.4	1658.9	1657.8	1658.4	1657.8
12.5°	1676.0	1679.3	1681.5	1682.6	1683.7	1683.7	1682.6	1681.5
15°	1689.3	1693.1	1695.9	1699.2	1701.4	1701.9	1700.8	1700.3
17.5°	1692.6	1695.9	1699.7	1703.0	1706.3	1708.6	1709.7	1709.1
20°	1683.2	1685.9	1690.4	1695.3	1699.7	1704.1	1707.5	1708.6
22.5°	1656.2	1663.9	1672.2	1678.2	1682.1	1684.3	1685.9	1689.8
25°	1545.3	1565.7	1595.5	1618.1	1614.2	1603.8	1599.9	1603.2
27.5°	1466.4	1464.2	1460.9	1478.6	1506.2	1530.4	1542.0	1547.5
30°	1395.9	1379.3	1363.9	1369.9	1398.1	1440.0	1475.3	1489.6
32.5°	1322.0	1299.3	1297.1	1301.0	1314.2	1342.4	1390.3	1417.4
35°	1244.2	1232.1	1238.7	1243.6	1248.1	1262.4	1295.5	1319.7
37.5°	1174.7	1172.5	1181.3	1187.4	1189.6	1196.8	1209.4	1206.1
40°	1113.5	1115.1	1122.9	1129.5	1133.9	1134.4	1126.7	1120.7
42.5°	1058.3	1065.5	1065.5	1073.8	1081.5	1071.0	1055.0	1059.4
45°	1002.1	1013.7	1013.1	1020.3	1027.4	1009.2	996.0	999.3
47.5°	935.9	958.0	961.3	969.0	969.0	950.2	939.8	935.9
50°	868.6	897.3	901.2	905.6	903.4	896.2	882.4	873.0
52.5°	806.3	833.3	837.2	835.5	839.9	843.2	824.5	812.9
55°	745.1	766.0	771.0	765.5	776.0	785.3	767.7	757.2
57.5°	684.4	700.4	704.8	700.4	712.0	722.5	710.9	703.7
60°	623.2	637.5	640.3	636.4	650.2	659.6	654.1	649.7
62.5°	563.1	573.0	575.8	577.4	585.7	596.7	595.6	595.1
65°	502.4	512.9	514.0	519.0	524.5	538.8	536.1	536.1
67.5°	443.4	450.6	452.2	460.0	462.2	475.9	474.3	472.1
70°	382.2	389.4	391.6	399.3	402.6	413.6	414.2	412.5
72.5°	325.9	328.7	330.9	338.1	340.8	351.3	351.3	349.1
75°	268.6	268.0	270.2	277.4	280.2	289.0	288.4	285.7
77.5°	214.5	211.8	213.4	218.4	221.7	228.3	226.1	223.9
80°	163.8	159.4	159.9	164.9	167.1	171.5	169.3	167.7
82.5°	115.8	112.0	110.9	114.7	118.0	118.6	118.0	116.9
85°	70.6	67.3	67.8	69.5	71.7	71.7	72.8	72.8
87.5°	27.6	25.9	25.9	27.6	27.6	28.1	27.6	26.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)