

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: P241258

Luminaire Tested: **1800-X-90-L30-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241258
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-L30-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4374.5 lumens
Efficiency: N/A
Efficacy: 81.2 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

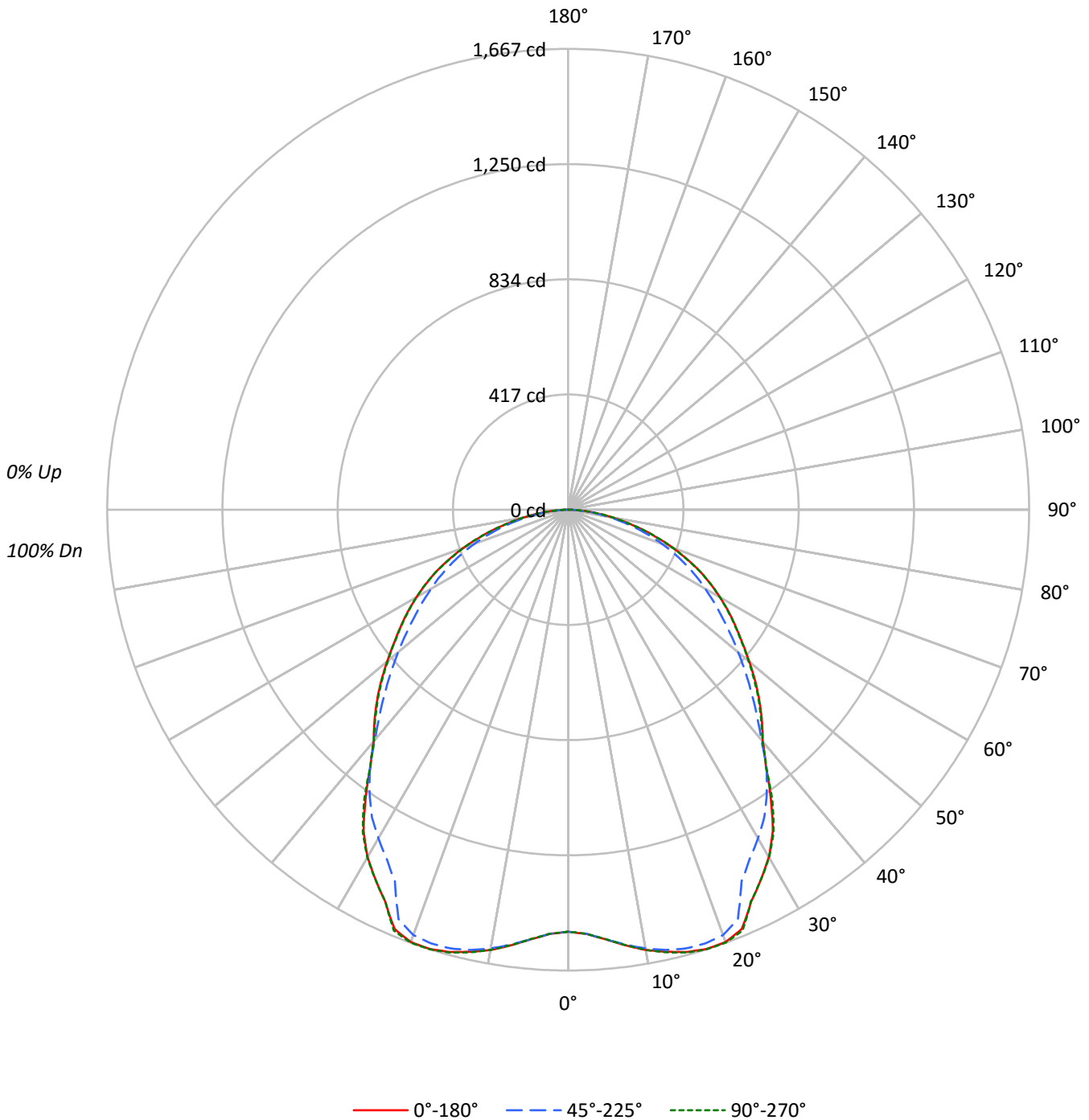
Input Watts (W): 53.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	15365	15365	15365
5°	15767	15767	15761
10°	16532	16477	16532
15°	17264	17129	17286
20°	17832	17544	17856
25°	17389	16475	17371
30°	16873	15960	16891
35°	15709	15392	15822
40°	14388	14281	14367
45°	13925	13350	13878
50°	13389	12580	13338
55°	12992	11944	12964
60°	12759	11525	12759
65°	12494	11174	12456
70°	11861	10625	11844
75°	10796	9773	10839
80°	9452	8576	9481
85°	8203	7151	8203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	3.4
10°-20°	467.0	10.7
20°-30°	706.3	16.1
30°-40°	771.0	17.6
40°-50°	756.8	17.3
50°-60°	662.6	15.1
60°-70°	497.9	11.4
70°-80°	284.6	6.5
80°-90°	77.6	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°	1324.0	30.3
0°-40°	2095.0	47.9
0°-60°	3514.3	80.3
0°-90°	4374.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4374.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1526	1526	1526	1526	1526	
5°	1560	1560	1560	1560	1559	151
15°	1656	1655	1643	1656	1658	468
25°	1565	1567	1483	1567	1564	723
35°	1278	1215	1252	1210	1287	797
45°	978	998	938	992	975	754
55°	740	752	680	749	738	664
65°	524	504	469	504	523	516
75°	278	267	251	267	279	295
85°	71	67	62	67	71	80
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°	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0
2.5°	1536.2	1535.1	1535.7	1535.1	1536.2	1536.2	1535.7	1536.2	1535.7	1535.7	1535.7
5°	1559.9	1558.8	1559.3	1558.2	1559.9	1560.4	1559.9	1560.4	1560.4	1559.9	1559.9
7.5°	1589.4	1587.3	1587.8	1586.8	1588.4	1588.4	1587.8	1587.8	1587.3	1586.8	1587.3
10°	1616.9	1615.8	1615.8	1615.3	1616.3	1615.8	1614.7	1614.2	1612.0	1611.5	1612.6
12.5°	1637.9	1638.9	1640.5	1640.5	1640.0	1639.5	1636.8	1635.2	1631.9	1631.4	1632.5
15°	1656.1	1656.7	1658.3	1657.8	1656.1	1653.5	1650.8	1647.5	1644.8	1643.2	1644.8
17.5°	1665.8	1665.8	1665.3	1663.7	1660.4	1657.2	1653.5	1650.2	1647.5	1645.4	1647.5
20°	1664.2	1664.2	1661.5	1658.3	1652.9	1648.1	1644.3	1641.1	1638.4	1637.3	1638.9
22.5°	1641.6	1643.2	1641.1	1640.5	1636.2	1629.8	1622.3	1614.2	1605.6	1602.9	1606.7
25°	1565.2	1564.2	1565.2	1575.5	1578.1	1556.6	1529.2	1503.9	1488.9	1482.9	1491.0
27.5°	1508.8	1507.7	1494.2	1472.7	1443.1	1429.2	1431.3	1429.2	1425.4	1422.7	1426.5
30°	1451.2	1443.1	1406.6	1367.3	1338.8	1334.5	1346.9	1362.5	1372.1	1372.7	1371.1
32.5°	1377.0	1360.8	1313.5	1283.4	1271.6	1269.4	1273.2	1289.3	1311.4	1320.0	1308.7
35°	1278.0	1268.9	1239.8	1220.5	1216.7	1214.0	1207.5	1215.6	1243.0	1252.2	1242.0
37.5°	1175.3	1183.9	1171.5	1164.5	1164.0	1158.6	1149.5	1150.5	1165.1	1178.0	1163.4
40°	1094.6	1103.2	1111.3	1110.7	1108.6	1100.5	1093.5	1089.8	1088.7	1086.5	1089.8
42.5°	1037.0	1033.8	1049.4	1058.0	1052.6	1047.3	1041.3	1038.7	1018.7	1009.6	1021.4
45°	977.9	976.8	987.6	1005.8	1001.5	994.0	992.4	981.6	947.7	937.5	950.4
47.5°	917.1	921.4	931.1	946.1	948.8	942.4	937.5	915.5	881.1	868.7	880.5
50°	854.7	864.4	877.8	883.7	886.4	882.7	879.4	850.9	816.0	803.1	816.5
52.5°	795.0	808.4	826.2	821.3	819.2	820.8	815.4	789.6	755.7	740.1	756.3
55°	740.1	753.0	768.6	759.0	748.7	754.6	749.8	729.4	699.8	680.4	698.7
57.5°	688.5	696.6	708.9	696.0	684.2	691.2	686.3	670.2	642.8	626.1	643.8
60°	633.6	640.1	647.1	634.7	622.3	626.1	623.9	609.4	586.8	572.3	585.8
62.5°	578.8	582.0	586.8	573.4	563.2	563.2	562.1	548.1	530.4	522.3	529.8
65°	524.4	523.9	525.5	512.1	504.5	503.5	501.3	488.4	474.4	469.0	475.0
67.5°	463.1	464.2	464.7	452.4	446.4	443.8	442.1	430.3	419.0	415.2	419.5
70°	402.9	403.4	403.4	392.1	387.8	383.5	381.9	372.8	363.6	360.9	364.7
72.5°	339.4	343.2	341.6	332.4	329.2	323.8	322.7	316.8	309.8	306.1	309.8
75°	277.5	282.9	281.3	273.2	269.5	264.1	264.6	261.4	253.9	251.2	255.0
77.5°	217.8	221.1	221.6	217.3	211.4	207.6	209.2	208.7	203.3	196.9	201.7
80°	163.0	166.7	167.3	163.5	158.7	155.4	157.6	157.6	153.3	147.9	152.2
82.5°	113.5	116.2	116.2	114.0	111.9	108.7	109.7	110.3	107.6	102.2	106.0
85°	71.0	71.5	70.5	68.8	67.2	66.2	66.2	67.2	65.1	61.9	64.5
87.5°	26.4	26.9	26.4	28.0	26.4	25.8	26.4	28.0	25.8	25.8	26.4
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°	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0	1526.0
2.5°	1535.7	1536.2	1536.2	1535.7	1535.7	1535.7	1535.1	1535.7
5°	1559.9	1560.4	1560.4	1559.3	1559.9	1559.3	1558.8	1559.3
7.5°	1587.8	1588.9	1588.4	1588.9	1589.4	1588.4	1588.4	1588.4
10°	1613.6	1615.3	1616.3	1617.4	1618.0	1616.9	1617.4	1616.9
12.5°	1634.6	1637.9	1640.0	1641.1	1642.2	1642.2	1641.1	1640.0
15°	1647.5	1651.3	1654.0	1657.2	1659.4	1659.9	1658.8	1658.3
17.5°	1650.8	1654.0	1657.8	1661.0	1664.2	1666.4	1667.4	1666.9
20°	1641.6	1644.3	1648.6	1653.5	1657.8	1662.1	1665.3	1666.4
22.5°	1615.3	1622.8	1630.9	1636.8	1640.5	1642.7	1644.3	1648.1
25°	1507.1	1527.0	1556.1	1578.1	1574.4	1564.2	1560.4	1563.6
27.5°	1430.2	1428.1	1424.9	1442.1	1469.0	1492.6	1503.9	1509.3
30°	1361.4	1345.2	1330.2	1336.1	1363.5	1404.4	1438.8	1452.8
32.5°	1289.3	1267.3	1265.1	1268.9	1281.8	1309.2	1356.0	1382.4
35°	1213.5	1201.6	1208.1	1212.9	1217.2	1231.2	1263.5	1287.2
37.5°	1145.7	1143.5	1152.1	1158.1	1160.2	1167.2	1179.6	1176.3
40°	1086.0	1087.6	1095.1	1101.6	1105.9	1106.4	1098.9	1093.0
42.5°	1032.2	1039.2	1039.2	1047.3	1054.8	1044.6	1029.0	1033.3
45°	977.3	988.6	988.1	995.1	1002.1	984.3	971.4	974.6
47.5°	912.8	934.3	937.5	945.1	945.1	926.8	916.6	912.8
50°	847.2	875.1	878.9	883.2	881.1	874.1	860.6	851.5
52.5°	786.4	812.7	816.5	814.9	819.2	822.4	804.1	792.8
55°	726.7	747.1	752.0	746.6	756.8	765.9	748.7	738.5
57.5°	667.5	683.1	687.4	683.1	694.4	704.6	693.3	686.3
60°	607.8	621.8	624.5	620.7	634.2	643.3	637.9	633.6
62.5°	549.2	558.9	561.5	563.2	571.2	582.0	580.9	580.4
65°	490.0	500.2	501.3	506.1	511.5	525.5	522.8	522.8
67.5°	432.5	439.5	441.1	448.6	450.7	464.2	462.6	460.4
70°	372.8	379.7	381.9	389.4	392.7	403.4	403.9	402.3
72.5°	317.9	320.6	322.7	329.7	332.4	342.6	342.6	340.5
75°	261.9	261.4	263.6	270.6	273.2	281.9	281.3	278.6
77.5°	209.2	206.5	208.2	213.0	216.2	222.7	220.5	218.4
80°	159.8	155.4	156.0	160.8	163.0	167.3	165.1	163.5
82.5°	113.0	109.2	108.1	111.9	115.1	115.6	115.1	114.0
85°	68.8	65.6	66.2	67.8	69.9	69.9	71.0	71.0
87.5°	26.9	25.3	25.3	26.9	26.9	27.4	26.9	25.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)