

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: P241256

Luminaire Tested: **1800-X-90-L27-2-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241256
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-L27-2-M-UNV-STD-X-X
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT
MEDIUM DISTRIBUTION.
Light Source: (168) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4183.9 lumens
Efficiency: N/A
Efficacy: 77.6 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

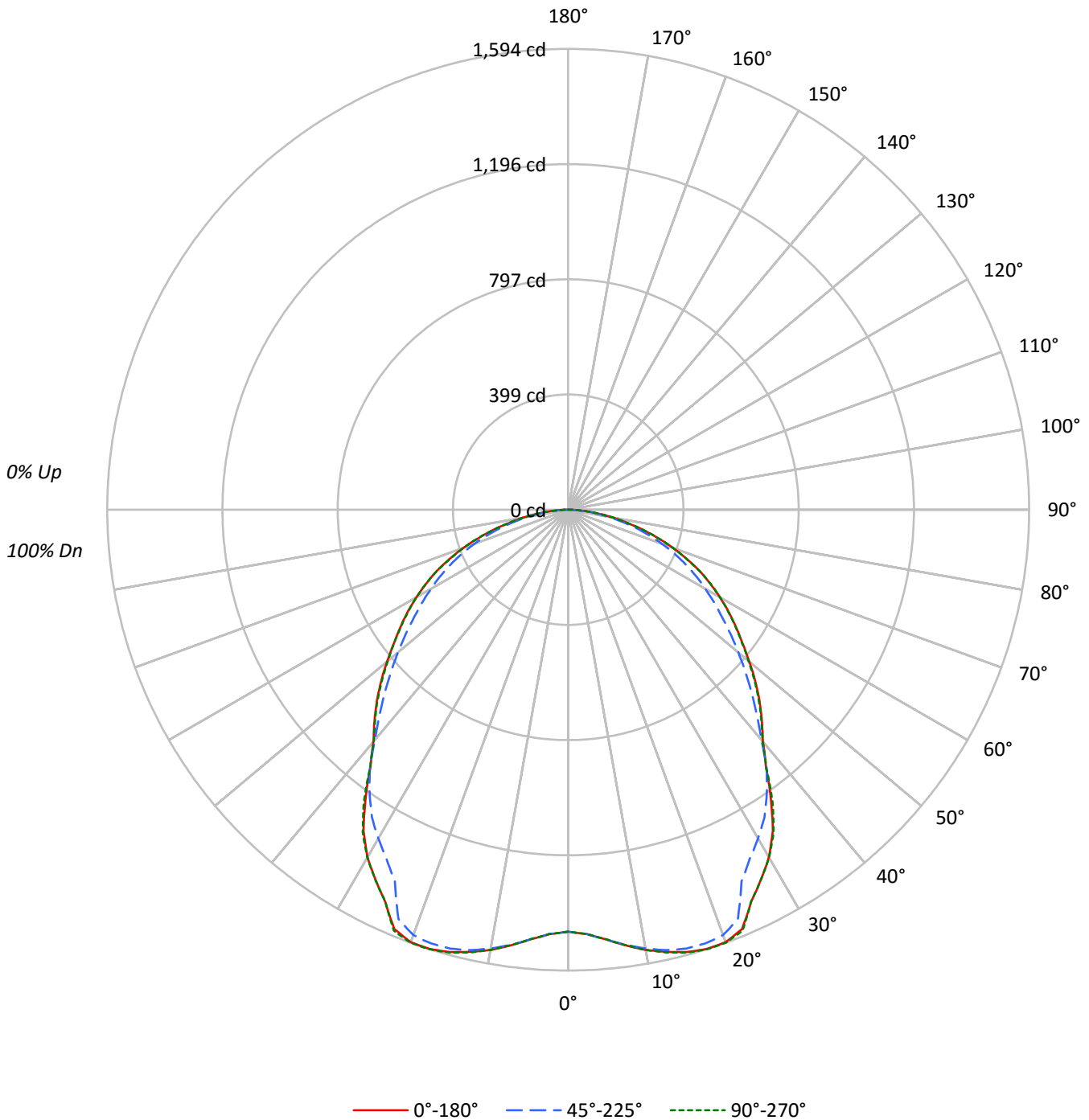
Input Watts (W): 53.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	14696	14696	14696
5°	15079	15079	15074
10°	15811	15759	15811
15°	16512	16384	16534
20°	17055	16780	17078
25°	16633	15757	16615
30°	16138	15265	16155
35°	15024	14721	15133
40°	13761	13659	13741
45°	13318	12769	13274
50°	12806	12032	12757
55°	12427	11425	12399
60°	12204	11024	12204
65°	11951	10688	11913
70°	11343	10163	11328
75°	10329	9345	10368
80°	9040	8205	9069
85°	7844	6839	7844



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	3.4
10°-20°	446.7	10.7
20°-30°	675.5	16.1
30°-40°	737.4	17.6
40°-50°	723.9	17.3
50°-60°	633.7	15.1
60°-70°	476.2	11.4
70°-80°	272.2	6.5
80°-90°	74.2	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°	1266.3	30.3
0°-40°	2003.7	47.9
0°-60°	3361.3	80.3
0°-90°	4183.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4183.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1460	1460	1460	1460	1460	
5°	1492	1492	1492	1492	1491	144
15°	1584	1583	1572	1583	1586	448
25°	1497	1499	1418	1499	1496	691
35°	1222	1162	1198	1158	1231	762
45°	935	954	897	948	932	721
55°	708	719	651	717	706	635
65°	502	482	449	482	500	493
75°	266	255	240	255	266	282
85°	68	64	59	64	68	76
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°	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5
2.5°	1469.3	1468.2	1468.8	1468.2	1469.3	1469.3	1468.8	1469.3	1468.8	1468.8	1468.8
5°	1491.9	1490.9	1491.4	1490.4	1491.9	1492.4	1491.9	1492.4	1492.4	1491.9	1491.9
7.5°	1520.2	1518.1	1518.7	1517.6	1519.2	1519.2	1518.7	1518.7	1518.1	1517.6	1518.1
10°	1546.4	1545.4	1545.4	1544.9	1545.9	1545.4	1544.4	1543.9	1541.8	1541.3	1542.3
12.5°	1566.5	1567.5	1569.1	1569.1	1568.6	1568.0	1565.5	1563.9	1560.8	1560.3	1561.4
15°	1584.0	1584.5	1586.1	1585.5	1584.0	1581.4	1578.9	1575.8	1573.2	1571.7	1573.2
17.5°	1593.3	1593.3	1592.7	1591.2	1588.1	1585.0	1581.4	1578.3	1575.8	1573.7	1575.8
20°	1591.7	1591.7	1589.1	1586.1	1580.9	1576.3	1572.7	1569.6	1567.0	1566.0	1567.5
22.5°	1570.1	1571.7	1569.6	1569.1	1565.0	1558.8	1551.6	1543.9	1535.6	1533.1	1536.7
25°	1497.1	1496.0	1497.1	1506.8	1509.4	1488.8	1462.6	1438.4	1424.0	1418.3	1426.1
27.5°	1443.0	1442.0	1429.1	1408.6	1380.3	1366.9	1369.0	1366.9	1363.3	1360.7	1364.3
30°	1388.0	1380.3	1345.3	1307.7	1280.5	1276.4	1288.2	1303.1	1312.4	1312.9	1311.3
32.5°	1317.0	1301.6	1256.3	1227.5	1216.2	1214.1	1217.7	1233.1	1254.2	1262.5	1251.7
35°	1222.3	1213.6	1185.8	1167.3	1163.7	1161.1	1154.9	1162.7	1188.9	1197.6	1187.9
37.5°	1124.1	1132.3	1120.5	1113.8	1113.3	1108.1	1099.4	1100.4	1114.3	1126.6	1112.8
40°	1046.9	1055.1	1062.9	1062.3	1060.3	1052.6	1045.9	1042.3	1041.3	1039.2	1042.3
42.5°	991.9	988.8	1003.7	1011.9	1006.8	1001.6	996.0	993.4	974.4	965.6	976.9
45°	935.3	934.2	944.5	962.0	957.9	950.7	949.2	938.9	906.5	896.7	909.0
47.5°	877.1	881.3	890.5	904.9	907.5	901.3	896.7	875.6	842.7	830.8	842.2
50°	817.5	826.7	839.6	845.2	847.8	844.2	841.1	813.9	780.4	768.1	780.9
52.5°	760.4	773.2	790.2	785.6	783.5	785.1	779.9	755.2	722.8	707.9	723.3
55°	707.9	720.2	735.2	725.9	716.1	721.8	717.1	697.6	669.3	650.8	668.3
57.5°	658.5	666.2	678.0	665.7	654.4	661.1	656.4	641.0	614.8	598.8	615.8
60°	606.0	612.2	618.9	607.1	595.2	598.8	596.8	582.9	561.3	547.4	560.2
62.5°	553.6	556.6	561.3	548.4	538.6	538.6	537.6	524.2	507.2	499.5	506.7
65°	501.6	501.1	502.6	489.8	482.6	481.5	479.5	467.1	453.7	448.6	454.3
67.5°	442.9	444.0	444.5	432.7	427.0	424.4	422.9	411.6	400.8	397.2	401.3
70°	385.3	385.8	385.8	375.0	370.9	366.8	365.3	356.5	347.8	345.2	348.8
72.5°	324.6	328.2	326.7	317.9	314.8	309.7	308.7	303.0	296.3	292.7	296.3
75°	265.5	270.6	269.1	261.3	257.7	252.6	253.1	250.0	242.8	240.2	243.9
77.5°	208.4	211.4	212.0	207.8	202.2	198.6	200.1	199.6	194.5	188.3	192.9
80°	155.9	159.5	160.0	156.4	151.8	148.7	150.7	150.7	146.6	141.5	145.6
82.5°	108.5	111.1	111.1	109.1	107.0	103.9	104.9	105.5	102.9	97.7	101.3
85°	67.9	68.4	67.4	65.8	64.3	63.3	63.3	64.3	62.2	59.2	61.7
87.5°	25.2	25.7	25.2	26.8	25.2	24.7	25.2	26.8	24.7	24.7	25.2
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°	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5	1459.5
2.5°	1468.8	1469.3	1469.3	1468.8	1468.8	1468.8	1468.2	1468.8
5°	1491.9	1492.4	1492.4	1491.4	1491.9	1491.4	1490.9	1491.4
7.5°	1518.7	1519.7	1519.2	1519.7	1520.2	1519.2	1519.2	1519.2
10°	1543.4	1544.9	1545.9	1547.0	1547.5	1546.4	1547.0	1546.4
12.5°	1563.4	1566.5	1568.6	1569.6	1570.6	1570.6	1569.6	1568.6
15°	1575.8	1579.4	1581.9	1585.0	1587.1	1587.6	1586.6	1586.1
17.5°	1578.9	1581.9	1585.5	1588.6	1591.7	1593.8	1594.8	1594.3
20°	1570.1	1572.7	1576.8	1581.4	1585.5	1589.7	1592.7	1593.8
22.5°	1544.9	1552.1	1559.8	1565.5	1569.1	1571.1	1572.7	1576.3
25°	1441.5	1460.5	1488.3	1509.4	1505.8	1496.0	1492.4	1495.5
27.5°	1367.9	1365.9	1362.8	1379.2	1405.0	1427.6	1438.4	1443.6
30°	1302.1	1286.6	1272.2	1277.9	1304.1	1343.2	1376.2	1389.5
32.5°	1233.1	1212.0	1210.0	1213.6	1225.9	1252.2	1296.9	1322.1
35°	1160.6	1149.3	1155.5	1160.1	1164.2	1177.6	1208.4	1231.1
37.5°	1095.8	1093.7	1102.0	1107.6	1109.7	1116.4	1128.2	1125.1
40°	1038.7	1040.2	1047.4	1053.6	1057.7	1058.2	1051.0	1045.4
42.5°	987.2	993.9	993.9	1001.6	1008.8	999.1	984.1	988.3
45°	934.8	945.6	945.0	951.7	958.4	941.4	929.1	932.2
47.5°	873.0	893.6	896.7	903.9	903.9	886.4	876.6	873.0
50°	810.3	837.0	840.6	844.7	842.7	836.0	823.1	814.4
52.5°	752.1	777.3	780.9	779.4	783.5	786.6	769.1	758.3
55°	695.0	714.6	719.2	714.1	723.8	732.6	716.1	706.3
57.5°	638.4	653.4	657.5	653.4	664.2	673.9	663.1	656.4
60°	581.3	594.7	597.3	593.7	606.5	615.3	610.1	606.0
62.5°	525.3	534.5	537.1	538.6	546.3	556.6	555.6	555.1
65°	468.7	478.4	479.5	484.1	489.2	502.6	500.0	500.0
67.5°	413.6	420.3	421.9	429.1	431.1	444.0	442.4	440.4
70°	356.5	363.2	365.3	372.5	375.5	385.8	386.4	384.8
72.5°	304.0	306.6	308.7	315.4	317.9	327.7	327.7	325.6
75°	250.5	250.0	252.1	258.8	261.3	269.6	269.1	266.5
77.5°	200.1	197.5	199.1	203.7	206.8	213.0	210.9	208.9
80°	152.8	148.7	149.2	153.8	155.9	160.0	157.9	156.4
82.5°	108.0	104.4	103.4	107.0	110.1	110.6	110.1	109.1
85°	65.8	62.8	63.3	64.8	66.9	66.9	67.9	67.9
87.5°	25.7	24.2	24.2	25.7	25.7	26.2	25.7	24.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)