

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: P241250

Luminaire Tested: **1800-X-90-L30-1-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241250
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-L30-1-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

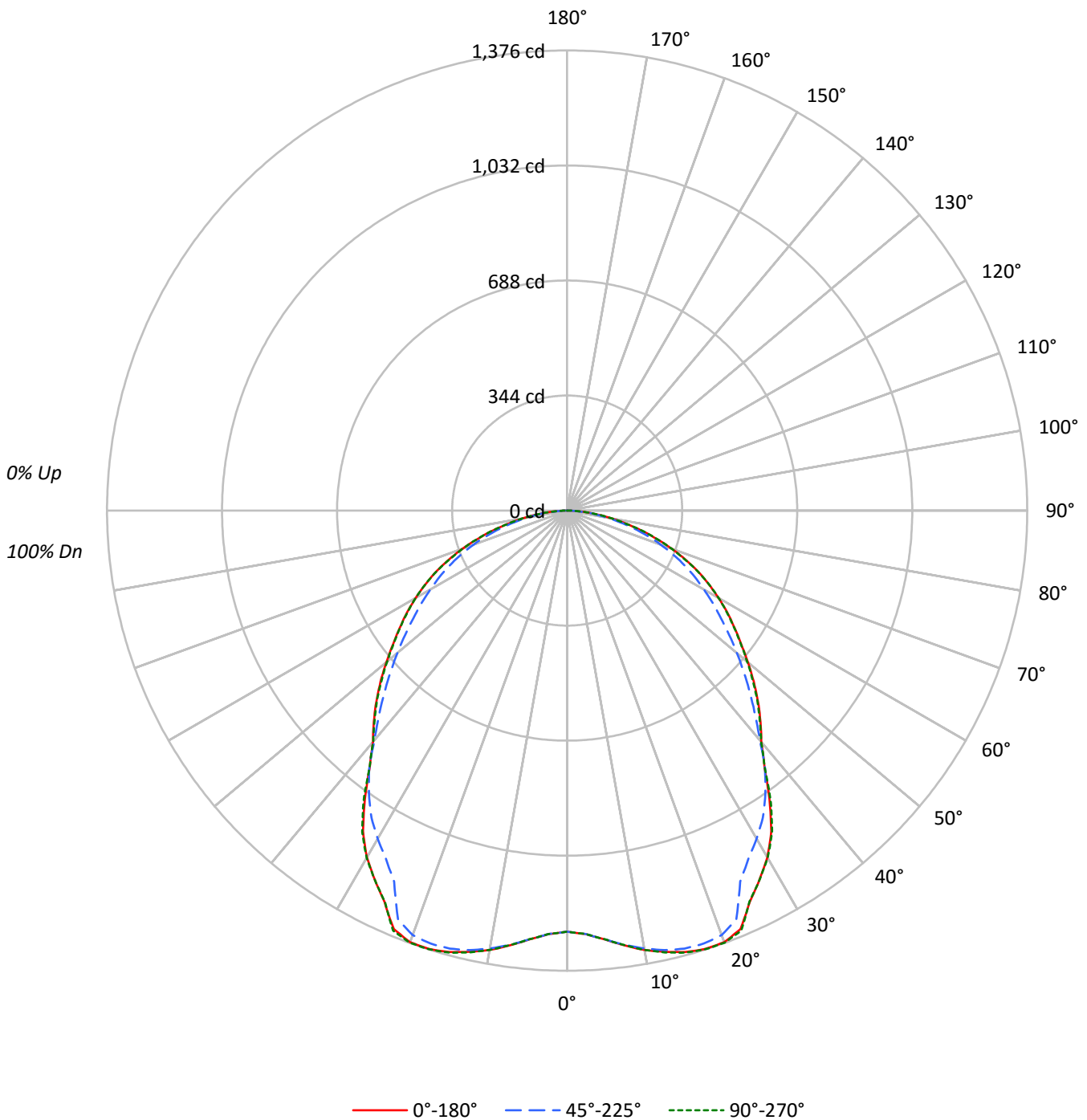
Lumens per Lamp: N/A
Luminaire Lumens: 3609.6 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.17' x H: 0')
CIE Type: Direct

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°	12679	12679	12679
5°	13009	13009	13005
10°	13641	13595	13641
15°	14246	14134	14264
20°	14714	14476	14733
25°	14350	13595	14334
30°	13923	13170	13938
35°	12963	12701	13055
40°	11872	11785	11855
45°	11490	11016	11452
50°	11048	10381	11006
55°	10721	9857	10698
60°	10528	9509	10528
65°	10309	9220	10278
70°	9786	8767	9774
75°	8909	8065	8944
80°	7799	7080	7822
85°	6770	5892	6770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.3	3.4
10°-20°	385.4	10.7
20°-30°	582.8	16.1
30°-40°	636.2	17.6
40°-50°	624.5	17.3
50°-60°	546.7	15.1
60°-70°	410.8	11.4
70°-80°	234.9	6.5
80°-90°	64.0	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°	1092.5	30.3
0°-40°	1728.7	47.9
0°-60°	2899.9	80.3
0°-90°	3609.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3609.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1287	1287	1287	1287	1287	124
15°	1367	1366	1356	1366	1368	387
25°	1292	1293	1224	1293	1290	596
35°	1055	1003	1033	999	1062	658
45°	807	823	774	818	804	622
55°	611	620	562	618	609	548
65°	433	416	387	416	431	426
75°	229	220	207	220	230	243
85°	59	55	51	55	59	66
90°	0	0	0	0	0	



TEST NUMBER: P241250

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2
2.5°	1267.6	1266.7	1267.2	1266.7	1267.6	1267.6	1267.2	1267.6	1267.2	1267.2	1267.2
5°	1287.1	1286.2	1286.7	1285.8	1287.1	1287.6	1287.1	1287.6	1287.6	1287.1	1287.1
7.5°	1311.5	1309.8	1310.2	1309.3	1310.7	1310.7	1310.2	1310.2	1309.8	1309.3	1309.8
10°	1334.2	1333.3	1333.3	1332.9	1333.7	1333.3	1332.4	1332.0	1330.2	1329.7	1330.6
12.5°	1351.5	1352.4	1353.7	1353.7	1353.3	1352.8	1350.6	1349.3	1346.6	1346.2	1347.1
15°	1366.6	1367.0	1368.4	1367.9	1366.6	1364.4	1362.1	1359.5	1357.3	1355.9	1357.3
17.5°	1374.6	1374.6	1374.1	1372.8	1370.1	1367.5	1364.4	1361.7	1359.5	1357.7	1359.5
20°	1373.2	1373.2	1371.0	1368.4	1363.9	1359.9	1356.8	1354.2	1351.9	1351.0	1352.4
22.5°	1354.6	1355.9	1354.2	1353.7	1350.2	1344.8	1338.6	1332.0	1324.9	1322.6	1325.7
25°	1291.6	1290.7	1291.6	1300.0	1302.2	1284.5	1261.8	1241.0	1228.5	1223.7	1230.3
27.5°	1245.0	1244.1	1233.0	1215.2	1190.8	1179.3	1181.1	1179.3	1176.2	1174.0	1177.1
30°	1197.5	1190.8	1160.6	1128.2	1104.7	1101.2	1111.4	1124.2	1132.2	1132.7	1131.3
32.5°	1136.2	1122.9	1083.9	1059.0	1049.2	1047.5	1050.6	1063.9	1082.1	1089.2	1079.9
35°	1054.6	1047.0	1023.1	1007.1	1004.0	1001.7	996.4	1003.1	1025.7	1033.3	1024.8
37.5°	969.8	976.9	966.7	960.9	960.5	956.0	948.5	949.4	961.4	972.0	960.0
40°	903.2	910.3	917.0	916.5	914.8	908.1	902.3	899.2	898.3	896.6	899.2
42.5°	855.7	853.1	865.9	873.0	868.6	864.2	859.3	857.1	840.6	833.1	842.9
45°	806.9	806.0	814.9	830.0	826.4	820.2	818.9	810.0	782.0	773.6	784.3
47.5°	756.7	760.3	768.3	780.7	782.9	777.6	773.6	755.4	727.0	716.8	726.6
50°	705.3	713.3	724.3	729.2	731.4	728.3	725.7	702.2	673.3	662.7	673.7
52.5°	656.0	667.1	681.7	677.7	676.0	677.3	672.9	651.6	623.6	610.7	624.0
55°	610.7	621.4	634.2	626.3	617.8	622.7	618.7	601.8	577.4	561.5	576.5
57.5°	568.1	574.8	585.0	574.3	564.6	570.3	566.3	553.0	530.4	516.6	531.3
60°	522.8	528.2	533.9	523.7	513.5	516.6	514.9	502.9	484.2	472.2	483.3
62.5°	477.6	480.2	484.2	473.1	464.7	464.7	463.8	452.3	437.6	431.0	437.2
65°	432.7	432.3	433.6	422.5	416.3	415.4	413.7	403.0	391.5	387.0	391.9
67.5°	382.1	383.0	383.5	373.3	368.4	366.2	364.8	355.1	345.8	342.6	346.2
70°	332.4	332.9	332.9	323.6	320.0	316.5	315.1	307.6	300.0	297.8	300.9
72.5°	280.1	283.2	281.8	274.3	271.6	267.2	266.3	261.4	255.7	252.5	255.7
75°	229.0	233.5	232.1	225.5	222.4	217.9	218.4	215.7	209.5	207.3	210.4
77.5°	179.8	182.4	182.9	179.3	174.4	171.3	172.7	172.2	167.8	162.4	166.4
80°	134.5	137.6	138.0	134.9	130.9	128.3	130.0	130.0	126.5	122.1	125.6
82.5°	93.7	95.9	95.9	94.1	92.3	89.7	90.5	91.0	88.8	84.3	87.4
85°	58.6	59.0	58.1	56.8	55.5	54.6	54.6	55.5	53.7	51.0	53.3
87.5°	21.7	22.2	21.7	23.1	21.7	21.3	21.7	23.1	21.3	21.3	21.7
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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CATALOG NUMBER: 1800-X-90-L30-1-M-UNV-STD-X-X

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2	1259.2
2.5°	1267.2	1267.6	1267.6	1267.2	1267.2	1267.2	1266.7	1267.2
5°	1287.1	1287.6	1287.6	1286.7	1287.1	1286.7	1286.2	1286.7
7.5°	1310.2	1311.1	1310.7	1311.1	1311.5	1310.7	1310.7	1310.7
10°	1331.5	1332.9	1333.7	1334.6	1335.1	1334.2	1334.6	1334.2
12.5°	1348.8	1351.5	1353.3	1354.2	1355.0	1355.0	1354.2	1353.3
15°	1359.5	1362.6	1364.8	1367.5	1369.2	1369.7	1368.8	1368.4
17.5°	1362.1	1364.8	1367.9	1370.6	1373.2	1375.0	1375.9	1375.5
20°	1354.6	1356.8	1360.4	1364.4	1367.9	1371.5	1374.1	1375.0
22.5°	1332.9	1339.1	1345.7	1350.6	1353.7	1355.5	1356.8	1359.9
25°	1243.6	1260.1	1284.0	1302.2	1299.1	1290.7	1287.6	1290.2
27.5°	1180.2	1178.4	1175.7	1189.9	1212.1	1231.7	1241.0	1245.4
30°	1123.4	1110.0	1097.6	1102.5	1125.1	1158.9	1187.3	1198.8
32.5°	1063.9	1045.7	1043.9	1047.0	1057.7	1080.3	1118.9	1140.7
35°	1001.3	991.5	996.9	1000.9	1004.4	1015.9	1042.6	1062.1
37.5°	945.4	943.6	950.7	955.6	957.4	963.1	973.3	970.7
40°	896.1	897.4	903.7	909.0	912.5	913.0	906.8	901.9
42.5°	851.7	857.5	857.5	864.2	870.4	861.9	849.1	852.6
45°	806.5	815.8	815.3	821.1	826.9	812.2	801.6	804.2
47.5°	753.2	770.9	773.6	779.8	779.8	764.7	756.3	753.2
50°	699.0	722.1	725.2	728.8	727.0	721.2	710.1	702.6
52.5°	648.9	670.6	673.7	672.4	676.0	678.6	663.5	654.2
55°	599.6	616.5	620.5	616.0	624.5	632.0	617.8	609.4
57.5°	550.8	563.7	567.2	563.7	573.0	581.4	572.1	566.3
60°	501.5	513.1	515.3	512.2	523.3	530.8	526.4	522.8
62.5°	453.2	461.1	463.4	464.7	471.4	480.2	479.3	478.9
65°	404.3	412.8	413.7	417.7	422.1	433.6	431.4	431.4
67.5°	356.8	362.6	363.9	370.2	371.9	383.0	381.7	379.9
70°	307.6	313.4	315.1	321.3	324.0	332.9	333.3	332.0
72.5°	262.3	264.5	266.3	272.1	274.3	282.7	282.7	281.0
75°	216.2	215.7	217.5	223.3	225.5	232.6	232.1	229.9
77.5°	172.7	170.4	171.8	175.8	178.4	183.7	182.0	180.2
80°	131.8	128.3	128.7	132.7	134.5	138.0	136.3	134.9
82.5°	93.2	90.1	89.2	92.3	95.0	95.4	95.0	94.1
85°	56.8	54.1	54.6	55.9	57.7	57.7	58.6	58.6
87.5°	22.2	20.9	20.9	22.2	22.2	22.6	22.2	21.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)