

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: P241252

Luminaire Tested: **1800-X-90-L35-1-M-UNV-STD-X-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P241252
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-L35-1-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: 3701.1 lumens
Efficiency: N/A
Efficacy: 88.5 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

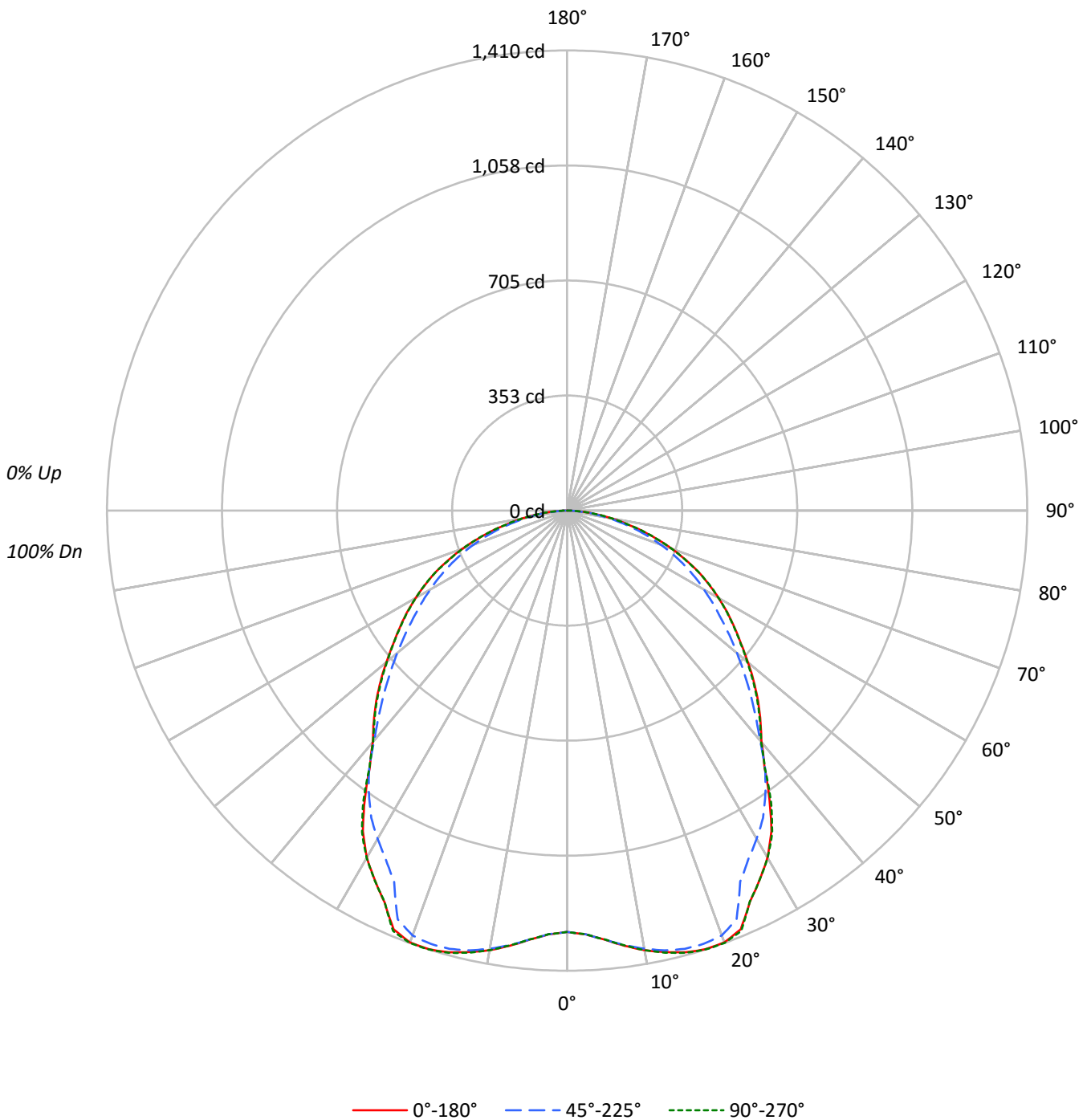
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13000	13000	13000
5°	13339	13339	13335
10°	13987	13940	13987
15°	14606	14493	14625
20°	15087	14844	15106
25°	14713	13940	14697
30°	14275	13503	14292
35°	13291	13022	13386
40°	12173	12083	12154
45°	11781	11295	11742
50°	11327	10643	11285
55°	10993	10106	10968
60°	10796	9751	10796
65°	10571	9454	10538
70°	10036	8991	10021
75°	9135	8267	9170
80°	7996	7254	8019
85°	6943	6042	6943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.5	3.4
10°-20°	395.1	10.7
20°-30°	597.5	16.1
30°-40°	652.3	17.6
40°-50°	640.3	17.3
50°-60°	560.6	15.1
60°-70°	421.2	11.4
70°-80°	240.8	6.5
80°-90°	65.7	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°	1120.2	30.3
0°-40°	1772.4	47.9
0°-60°	2973.3	80.3
0°-90°	3701.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3701.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1320	1320	1320	1320	1319	128
15°	1401	1400	1390	1401	1403	396
25°	1324	1326	1255	1326	1323	611
35°	1081	1028	1059	1024	1089	674
45°	827	844	793	839	825	638
55°	626	636	576	634	625	562
65°	444	426	397	426	442	436
75°	235	226	212	226	236	249
85°	60	56	52	57	60	67
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°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1299.7	1298.8	1299.2	1298.8	1299.7	1299.7	1299.2	1299.7	1299.2	1299.2	1299.2
5°	1319.7	1318.8	1319.3	1318.4	1319.7	1320.2	1319.7	1320.2	1320.2	1319.7	1319.7
7.5°	1344.8	1342.9	1343.4	1342.5	1343.8	1343.8	1343.4	1343.4	1342.9	1342.5	1342.9
10°	1368.0	1367.1	1367.1	1366.6	1367.5	1367.1	1366.1	1365.7	1363.9	1363.4	1364.3
12.5°	1385.7	1386.6	1388.0	1388.0	1387.5	1387.1	1384.8	1383.4	1380.7	1380.3	1381.2
15°	1401.2	1401.6	1403.0	1402.6	1401.2	1398.9	1396.6	1393.9	1391.6	1390.3	1391.6
17.5°	1409.4	1409.4	1408.9	1407.6	1404.8	1402.1	1398.9	1396.2	1393.9	1392.1	1393.9
20°	1408.0	1408.0	1405.7	1403.0	1398.5	1394.4	1391.2	1388.4	1386.2	1385.3	1386.6
22.5°	1388.9	1390.3	1388.4	1388.0	1384.3	1378.9	1372.5	1365.7	1358.4	1356.1	1359.3
25°	1324.3	1323.4	1324.3	1332.9	1335.2	1317.0	1293.8	1272.4	1259.7	1254.7	1261.5
27.5°	1276.5	1275.6	1264.2	1246.0	1221.0	1209.1	1211.0	1209.1	1206.0	1203.7	1206.9
30°	1227.8	1221.0	1190.0	1156.8	1132.7	1129.1	1139.5	1152.7	1160.9	1161.4	1160.0
32.5°	1165.0	1151.3	1111.3	1085.8	1075.8	1074.0	1077.2	1090.8	1109.5	1116.8	1107.2
35°	1081.3	1073.5	1049.0	1032.6	1029.4	1027.1	1021.7	1028.5	1051.7	1059.4	1050.8
37.5°	994.3	1001.6	991.2	985.2	984.8	980.2	972.5	973.4	985.7	996.6	984.3
40°	926.1	933.4	940.2	939.7	937.9	931.1	925.2	922.0	921.1	919.3	922.0
42.5°	877.4	874.7	887.9	895.1	890.6	886.0	881.0	878.8	861.9	854.2	864.2
45°	827.3	826.4	835.5	851.0	847.4	841.0	839.6	830.5	801.8	793.2	804.1
47.5°	775.9	779.5	787.7	800.5	802.8	797.3	793.2	774.5	745.4	735.0	745.0
50°	723.1	731.3	742.7	747.7	750.0	746.8	744.1	719.9	690.4	679.4	690.8
52.5°	672.6	684.0	699.0	694.9	693.1	694.5	689.9	668.1	639.4	626.2	639.8
55°	626.2	637.1	650.3	642.1	633.5	638.5	634.4	617.1	592.1	575.7	591.1
57.5°	582.5	589.3	599.8	588.9	578.9	584.8	580.7	567.0	543.8	529.7	544.7
60°	536.1	541.5	547.5	537.0	526.5	529.7	527.9	515.6	496.5	484.2	495.6
62.5°	489.7	492.4	496.5	485.1	476.5	476.5	475.6	463.7	448.7	441.9	448.3
65°	443.7	443.2	444.6	433.2	426.9	426.0	424.1	413.2	401.4	396.8	401.8
67.5°	391.8	392.7	393.2	382.7	377.7	375.4	374.1	364.1	354.5	351.3	355.0
70°	340.9	341.3	341.3	331.8	328.1	324.5	323.1	315.4	307.6	305.4	308.5
72.5°	287.2	290.3	289.0	281.2	278.5	274.0	273.0	268.0	262.1	258.9	262.1
75°	234.8	239.4	238.0	231.2	228.0	223.4	223.9	221.2	214.8	212.5	215.7
77.5°	184.3	187.0	187.5	183.9	178.8	175.7	177.0	176.6	172.0	166.6	170.7
80°	137.9	141.1	141.5	138.3	134.2	131.5	133.3	133.3	129.7	125.1	128.8
82.5°	96.0	98.3	98.3	96.5	94.7	91.9	92.8	93.3	91.0	86.5	89.7
85°	60.1	60.5	59.6	58.3	56.9	56.0	56.0	56.9	55.1	52.3	54.6
87.5°	22.3	22.8	22.3	23.7	22.3	21.8	22.3	23.7	21.8	21.8	22.3
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°	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1299.2	1299.7	1299.7	1299.2	1299.2	1299.2	1298.8	1299.2
5°	1319.7	1320.2	1320.2	1319.3	1319.7	1319.3	1318.8	1319.3
7.5°	1343.4	1344.3	1343.8	1344.3	1344.8	1343.8	1343.8	1343.8
10°	1365.2	1366.6	1367.5	1368.4	1368.9	1368.0	1368.4	1368.0
12.5°	1383.0	1385.7	1387.5	1388.4	1389.4	1389.4	1388.4	1387.5
15°	1393.9	1397.1	1399.4	1402.1	1403.9	1404.4	1403.5	1403.0
17.5°	1396.6	1399.4	1402.6	1405.3	1408.0	1409.8	1410.7	1410.3
20°	1388.9	1391.2	1394.8	1398.9	1402.6	1406.2	1408.9	1409.8
22.5°	1366.6	1373.0	1379.8	1384.8	1388.0	1389.8	1391.2	1394.4
25°	1275.1	1292.0	1316.5	1335.2	1332.0	1323.4	1320.2	1322.9
27.5°	1210.1	1208.2	1205.5	1220.1	1242.8	1262.8	1272.4	1277.0
30°	1151.8	1138.2	1125.4	1130.4	1153.6	1188.2	1217.3	1229.2
32.5°	1090.8	1072.2	1070.3	1073.5	1084.5	1107.7	1147.3	1169.6
35°	1026.7	1016.6	1022.1	1026.2	1029.8	1041.7	1069.0	1089.0
37.5°	969.3	967.5	974.8	979.8	981.6	987.5	998.0	995.3
40°	918.8	920.2	926.5	932.0	935.6	936.1	929.7	924.7
42.5°	873.3	879.2	879.2	886.0	892.4	883.8	870.6	874.2
45°	826.9	836.4	836.0	841.9	847.8	832.8	821.9	824.6
47.5°	772.3	790.5	793.2	799.6	799.6	784.1	775.5	772.3
50°	716.7	740.4	743.6	747.2	745.4	739.5	728.1	720.4
52.5°	665.3	687.6	690.8	689.4	693.1	695.8	680.3	670.8
55°	614.8	632.1	636.2	631.6	640.3	648.0	633.5	624.8
57.5°	564.8	577.9	581.6	577.9	587.5	596.2	586.6	580.7
60°	514.2	526.1	528.3	525.2	536.5	544.3	539.7	536.1
62.5°	464.6	472.8	475.1	476.5	483.3	492.4	491.5	491.0
65°	414.6	423.2	424.1	428.2	432.8	444.6	442.3	442.3
67.5°	365.9	371.8	373.2	379.5	381.4	392.7	391.4	389.5
70°	315.4	321.3	323.1	329.5	332.2	341.3	341.8	340.4
72.5°	269.0	271.2	273.0	279.0	281.2	289.9	289.9	288.1
75°	221.6	221.2	223.0	228.9	231.2	238.5	238.0	235.7
77.5°	177.0	174.8	176.1	180.2	182.9	188.4	186.6	184.8
80°	135.2	131.5	132.0	136.1	137.9	141.5	139.7	138.3
82.5°	95.6	92.4	91.5	94.7	97.4	97.8	97.4	96.5
85°	58.3	55.5	56.0	57.3	59.2	59.2	60.1	60.1
87.5°	22.8	21.4	21.4	22.8	22.8	23.2	22.8	21.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)