

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: FAIL-SAFE

Report Number: P241581

Luminaire Tested: **FVS8M-3-LD4-30-2HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241581
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-30-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

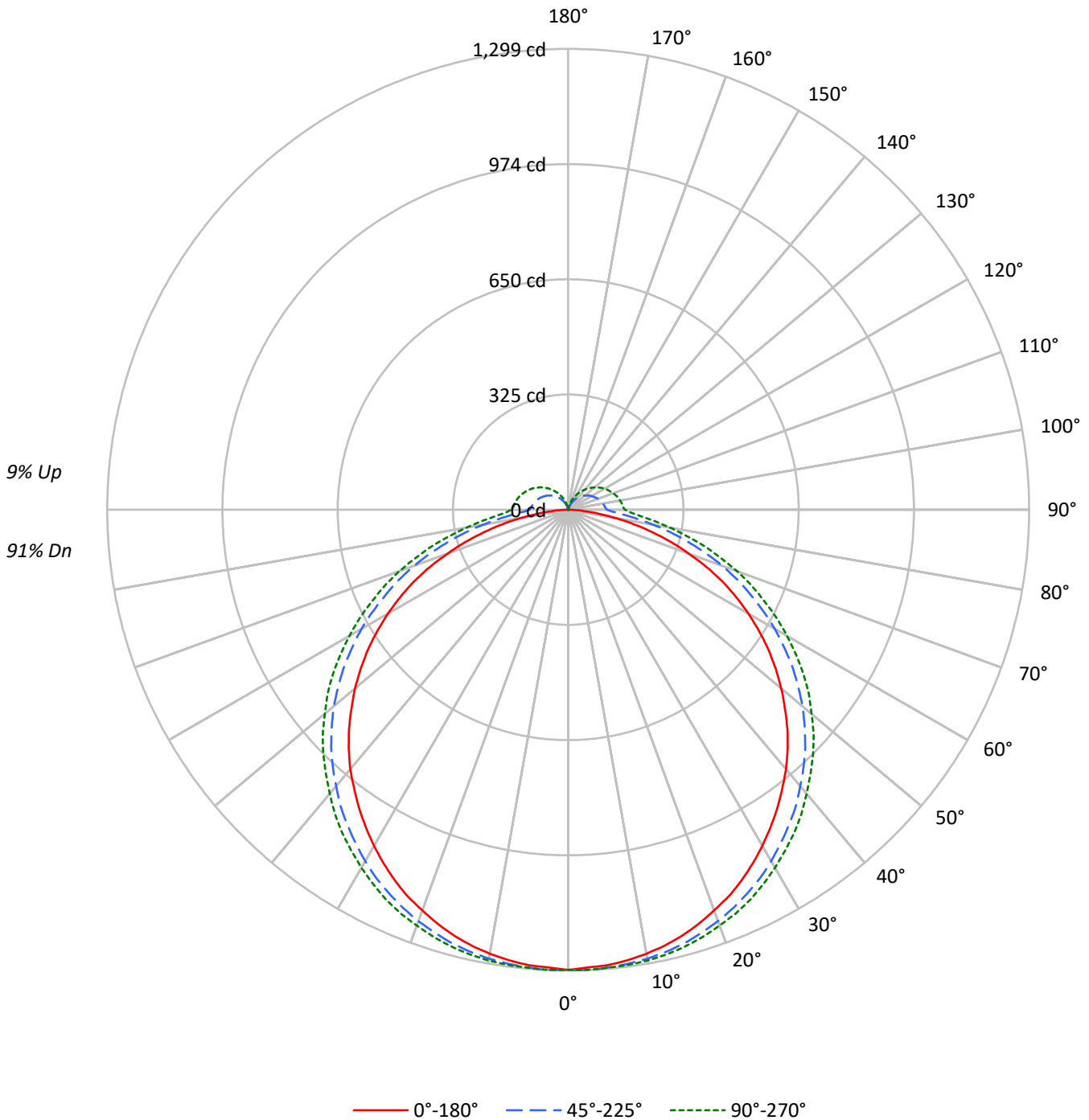
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4566.0 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 69.3
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





TEST NUMBER: P241581

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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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	106	101	96	92	102	97	93	89	92	88	85	86	83	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	70	67	64	61
3	87	76	67	61	84	74	66	59	69	63	57	65	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	48	58	52	47	55	50	45	43
5	73	60	50	43	70	58	49	43	55	47	42	52	45	40	49	44	39	37
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7574	7574	7574
5°	7520	7464	7450
10°	7468	7365	7359
15°	7411	7267	7265
20°	7334	7159	7162
25°	7264	7048	7073
30°	7166	6930	6952
35°	7070	6800	6839
40°	6980	6658	6698
45°	6861	6523	6573
50°	6713	6349	6405
55°	6537	6132	6230
60°	6293	5869	5973
65°	5970	5516	5670
70°	5418	5123	5328
75°	4648	4546	4868
80°	3528	3864	4282
85°	1950	3170	3798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.2	2.7
10°-20°	356.3	7.8
20°-30°	548.1	12.0
30°-40°	674.8	14.8
40°-50°	721.5	15.8
50°-60°	679.9	14.9
60°-70°	551.6	12.1
70°-80°	357.0	7.8
80°-90°	163.1	3.6
90°-100°	100.8	2.2
100°-110°	89.4	2.0
110°-120°	73.7	1.6
120°-130°	55.9	1.2
130°-140°	37.9	0.8
140°-150°	21.6	0.5
150°-160°	9.2	0.2
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	1027.5	22.5
0°-40°	1702.3	37.3
0°-60°	3103.7	68.0
0°-90°	4175.4	91.4
90°-120°	263.9	5.8
90°-150°	379.3	8.3
90°-180°	391.0	8.6
0°-180°	4566.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1289	1290	1295	1297	1296	122
15°	1243	1250	1265	1273	1274	351
25°	1154	1169	1194	1207	1213	532
35°	1027	1054	1085	1105	1111	643
45°	873	906	945	966	976	673
55°	689	726	771	798	809	615
65°	479	519	567	601	609	472
75°	245	293	349	382	398	261
85°	46	96	153	191	203	57
90°	1	51	109	148	160	3
95°	1	47	103	141	153	0
105°	1	41	95	131	143	0
115°	1	35	83	116	127	1
125°	1	28	70	98	108	1
135°	1	21	54	78	86	1
145°	1	11	38	56	62	1
155°	1	5	20	34	38	0
165°	2	1	6	11	14	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1
2.5°	1291.4	1292.4	1292.4	1292.4	1293.3	1294.3	1295.2	1297.1	1298.0	1299.0	1299.0
5°	1288.6	1288.6	1288.6	1288.6	1289.6	1290.5	1292.4	1293.3	1294.3	1295.2	1295.2
7.5°	1281.1	1282.0	1282.0	1282.0	1283.0	1283.9	1284.9	1287.7	1289.6	1290.5	1291.4
10°	1270.8	1272.6	1272.6	1272.6	1273.6	1275.5	1276.4	1279.2	1282.0	1283.9	1284.9
12.5°	1258.5	1258.5	1259.5	1259.5	1262.3	1263.2	1266.1	1269.8	1271.7	1274.5	1276.4
15°	1242.6	1243.5	1243.5	1244.4	1248.2	1250.1	1252.0	1255.7	1260.4	1262.3	1265.1
17.5°	1223.8	1224.7	1226.6	1227.5	1231.3	1234.1	1236.0	1240.7	1245.4	1248.2	1250.1
20°	1202.1	1204.0	1205.0	1207.8	1212.5	1215.3	1217.2	1222.8	1227.5	1230.3	1234.1
22.5°	1180.5	1180.5	1182.4	1186.2	1190.9	1194.6	1197.4	1202.1	1207.8	1210.6	1215.3
25°	1154.2	1154.2	1157.0	1161.7	1166.4	1169.2	1172.1	1178.6	1185.2	1189.9	1193.7
27.5°	1125.1	1126.0	1129.8	1134.5	1140.1	1144.8	1146.7	1154.2	1159.8	1166.4	1171.1
30°	1094.1	1096.9	1100.6	1105.3	1112.9	1116.6	1120.4	1126.9	1133.5	1140.1	1143.9
32.5°	1061.2	1063.0	1069.6	1074.3	1081.8	1086.5	1090.3	1097.8	1104.4	1110.0	1114.7
35°	1027.3	1029.2	1034.8	1041.4	1049.9	1053.6	1056.5	1065.9	1074.3	1080.0	1084.7
37.5°	990.7	994.4	999.1	1005.7	1016.0	1019.8	1023.6	1032.0	1040.5	1046.1	1053.6
40°	954.9	955.9	961.5	970.9	979.4	982.2	987.8	998.2	1004.8	1012.3	1017.0
42.5°	915.5	916.4	922.0	931.4	939.9	945.5	951.2	960.6	968.1	975.6	982.2
45°	873.2	876.0	881.6	891.0	899.5	906.1	910.8	921.1	929.6	936.1	944.6
47.5°	828.1	831.8	838.4	847.8	857.2	863.8	868.5	877.9	888.2	895.7	903.3
50°	783.9	788.6	794.2	804.6	814.0	820.5	824.3	834.6	844.0	853.4	861.9
52.5°	736.9	740.6	748.2	758.5	767.9	774.5	778.2	790.5	800.8	808.3	815.8
55°	689.0	692.7	700.2	709.6	720.9	725.6	731.2	743.5	752.9	762.3	770.7
57.5°	638.2	642.9	650.4	660.8	671.1	675.8	681.4	692.7	704.9	713.4	720.9
60°	586.5	589.3	596.8	609.1	618.5	624.1	630.7	641.0	653.2	662.6	673.0
62.5°	533.9	536.7	544.2	556.4	567.7	571.5	579.0	591.2	600.6	612.8	620.3
65°	479.4	483.1	490.6	499.1	513.2	518.8	524.5	536.7	547.0	557.4	566.8
67.5°	422.0	423.9	435.2	445.5	454.9	463.4	470.0	482.2	493.5	504.7	516.0
70°	361.9	366.6	376.0	388.2	399.5	407.0	411.7	425.8	438.0	452.1	461.5
72.5°	304.5	311.1	320.5	330.8	342.1	351.5	357.2	369.4	381.6	393.8	405.1
75°	245.3	252.8	263.2	274.5	286.7	293.3	302.7	314.9	327.1	338.4	348.7
77.5°	189.9	194.6	207.7	219.0	234.0	239.7	245.3	259.4	271.6	283.9	296.1
80°	135.3	141.0	152.3	165.4	179.5	185.2	192.7	205.8	219.0	231.2	242.5
82.5°	87.4	93.1	102.4	115.6	129.7	136.3	143.8	157.0	171.1	183.3	194.6
85°	46.1	50.8	61.1	74.3	88.4	95.9	101.5	116.5	127.8	142.9	153.2
87.5°	16.9	20.7	30.1	45.1	58.3	66.7	72.4	86.5	99.6	111.8	124.1
90°	0.9	6.6	16.9	30.1	44.2	50.8	58.3	72.4	85.5	97.8	109.0
92.5°	0.0	4.7	15.0	27.3	41.4	48.9	55.5	68.6	81.8	94.0	105.3
95°	0.9	4.7	14.1	26.3	40.4	47.0	54.5	67.7	79.9	92.1	103.4
97.5°	0.0	3.8	13.2	25.4	38.5	46.1	52.6	65.8	79.0	90.2	101.5
100°	0.9	3.8	12.2	24.4	37.6	44.2	50.8	63.9	77.1	88.4	99.6
102.5°	0.0	3.8	12.2	23.5	36.7	43.2	49.8	62.0	74.3	86.5	96.8
105°	0.9	2.8	11.3	22.6	34.8	41.4	47.9	60.2	72.4	83.7	94.9
107.5°	0.0	2.8	10.3	21.6	33.8	39.5	46.1	58.3	70.5	81.8	92.1
110°	0.9	2.8	10.3	20.7	32.0	38.5	44.2	56.4	67.7	79.0	89.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	1.9	9.4	19.7	31.0	36.7	42.3	54.5	65.8	76.1	86.5
115°	0.9	1.9	8.5	18.8	29.1	34.8	40.4	51.7	63.0	73.3	82.7
117.5°	0.9	1.9	8.5	16.9	28.2	32.9	38.5	49.8	60.2	70.5	79.9
120°	0.9	1.9	7.5	16.0	26.3	31.0	36.7	47.0	57.3	67.7	76.1
122.5°	0.9	0.9	6.6	15.0	24.4	30.1	34.8	45.1	54.5	63.9	73.3
125°	0.9	0.9	5.6	14.1	23.5	28.2	32.9	42.3	51.7	61.1	69.6
127.5°	0.9	0.9	5.6	13.2	21.6	26.3	31.0	39.5	48.9	57.3	65.8
130°	0.9	0.9	4.7	11.3	19.7	24.4	28.2	37.6	46.1	54.5	62.0
132.5°	0.9	0.9	3.8	10.3	17.9	22.6	26.3	34.8	43.2	50.8	58.3
135°	0.9	0.9	3.8	9.4	16.9	20.7	24.4	32.0	39.5	47.0	54.5
137.5°	0.9	0.9	2.8	7.5	14.1	17.9	21.6	29.1	36.7	43.2	49.8
140°	0.9	0.9	1.9	6.6	12.2	16.0	19.7	26.3	33.8	40.4	46.1
142.5°	0.9	0.9	1.9	5.6	11.3	14.1	16.9	23.5	30.1	36.7	42.3
145°	0.9	0.9	1.9	4.7	9.4	11.3	14.1	19.7	26.3	32.0	37.6
147.5°	0.9	0.9	0.9	3.8	7.5	9.4	12.2	16.9	22.6	28.2	32.9
150°	0.9	0.9	0.9	2.8	6.6	8.5	10.3	14.1	18.8	23.5	28.2
152.5°	0.9	0.9	0.9	1.9	4.7	6.6	8.5	12.2	16.0	19.7	23.5
155°	0.9	0.9	0.9	1.9	3.8	4.7	6.6	9.4	13.2	16.0	19.7
157.5°	0.9	0.9	0.9	1.9	2.8	3.8	4.7	7.5	9.4	12.2	16.0
160°	0.9	0.9	0.9	0.9	1.9	2.8	3.8	4.7	7.5	9.4	11.3
162.5°	1.9	1.9	0.9	0.9	1.9	1.9	2.8	3.8	4.7	6.6	8.5
165°	1.9	1.9	1.9	0.9	0.9	0.9	1.9	2.8	3.8	4.7	5.6
167.5°	1.9	1.9	1.9	1.9	0.9	0.9	0.9	0.9	1.9	2.8	2.8
170°	1.9	1.9	1.9	1.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1	1297.1
2.5°	1299.0	1299.0	1299.0	1299.0	1299.0	1299.0	1299.0	1299.0	1298.0	1298.0
5°	1295.2	1295.2	1296.1	1297.1	1297.1	1297.1	1297.1	1296.1	1296.1	1296.1
7.5°	1291.4	1293.3	1294.3	1294.3	1294.3	1294.3	1295.2	1295.2	1294.3	1294.3
10°	1285.8	1286.7	1288.6	1289.6	1289.6	1289.6	1289.6	1290.5	1290.5	1290.5
12.5°	1278.3	1279.2	1280.2	1282.0	1282.0	1283.0	1283.9	1283.0	1284.9	1283.9
15°	1266.1	1268.9	1270.8	1271.7	1272.6	1272.6	1273.6	1274.5	1274.5	1274.5
17.5°	1252.9	1254.8	1257.6	1259.5	1259.5	1261.4	1260.4	1262.3	1263.2	1262.3
20°	1236.0	1238.8	1241.6	1243.5	1245.4	1245.4	1246.3	1247.3	1247.3	1247.3
22.5°	1218.1	1220.9	1223.8	1226.6	1227.5	1228.5	1230.3	1231.3	1231.3	1232.2
25°	1196.5	1200.3	1204.0	1205.9	1206.8	1208.7	1209.7	1210.6	1211.5	1213.4
27.5°	1173.9	1177.7	1181.5	1184.3	1184.3	1187.1	1189.0	1189.9	1189.9	1189.9
30°	1148.6	1152.3	1155.1	1159.8	1159.8	1160.8	1162.7	1165.5	1164.5	1165.5
32.5°	1120.4	1125.1	1128.8	1130.7	1133.5	1135.4	1135.4	1138.2	1140.1	1138.2
35°	1090.3	1095.0	1099.7	1102.5	1105.3	1105.3	1109.1	1109.1	1111.0	1111.0
37.5°	1059.3	1063.0	1067.7	1070.6	1073.4	1076.2	1078.1	1078.1	1079.0	1080.0
40°	1023.6	1028.3	1034.8	1039.5	1040.5	1041.4	1044.2	1045.2	1047.1	1045.2
42.5°	987.8	993.5	999.1	1003.8	1003.8	1006.6	1008.5	1010.4	1011.3	1010.4
45°	949.3	956.8	960.6	966.2	966.2	969.0	970.9	974.7	975.6	975.6
47.5°	908.9	915.5	922.0	927.7	927.7	930.5	931.4	934.3	935.2	938.0
50°	868.5	875.1	879.8	886.3	887.3	889.2	892.0	893.9	894.8	894.8
52.5°	825.2	830.9	836.5	841.2	845.0	845.0	849.7	850.6	851.6	855.3
55°	779.2	785.8	791.4	798.0	798.0	799.9	802.7	804.6	807.4	809.3
57.5°	730.3	736.9	745.3	748.2	751.9	753.8	757.6	758.5	759.4	761.3
60°	680.5	688.0	693.7	699.3	702.1	704.0	706.8	709.6	711.5	711.5
62.5°	630.7	635.4	643.8	650.4	652.3	656.1	657.9	659.8	661.7	662.6
65°	577.1	584.6	593.1	597.8	600.6	600.6	605.3	609.1	608.1	609.1
67.5°	523.5	532.0	537.6	544.2	547.0	549.8	554.5	555.5	558.3	559.2
70°	468.1	478.4	485.0	489.7	494.4	493.5	500.0	501.0	503.8	505.7
72.5°	414.5	422.0	431.4	436.1	438.9	440.8	444.6	447.4	447.4	449.3
75°	359.0	366.6	374.1	381.6	381.6	387.2	391.0	394.8	394.8	397.6
77.5°	303.6	314.9	322.4	327.1	330.8	333.7	336.5	341.2	340.2	341.2
80°	251.0	260.4	267.9	275.4	278.2	281.0	283.9	287.6	289.5	290.4
82.5°	203.0	212.4	220.9	227.5	230.3	234.0	238.7	241.6	242.5	245.3
85°	162.6	172.0	180.5	188.0	190.8	192.7	197.4	200.2	202.1	203.0
87.5°	134.4	143.8	152.3	158.8	161.7	164.5	169.2	172.0	174.8	174.8
90°	119.4	128.8	137.2	143.8	147.6	150.4	155.1	157.9	159.8	159.8
92.5°	115.6	124.1	132.5	139.1	142.9	145.7	149.4	152.3	155.1	155.1
95°	113.7	123.1	130.6	137.2	141.0	143.8	147.6	151.3	153.2	153.2
97.5°	111.8	121.2	128.8	135.3	139.1	141.9	145.7	148.5	150.4	151.3
100°	109.0	118.4	126.9	133.5	136.3	139.1	143.8	146.6	148.5	148.5
102.5°	107.1	115.6	124.1	130.6	133.5	136.3	140.0	143.8	144.7	145.7
105°	104.3	112.8	121.2	127.8	130.6	133.5	137.2	140.0	141.9	142.9
107.5°	101.5	110.0	117.5	124.1	126.9	129.7	134.4	137.2	139.1	139.1
110°	98.7	107.1	114.7	120.3	124.1	125.9	130.6	133.5	135.3	135.3



TEST NUMBER: P241581

CATALOG NUMBER: FVS8M-3-LD4-30-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	94.9	103.4	110.9	116.5	119.4	122.2	125.9	128.8	130.6	131.6
115°	92.1	99.6	107.1	112.8	115.6	118.4	122.2	125.0	126.9	126.9
117.5°	88.4	95.9	102.4	109.0	111.8	113.7	117.5	120.3	122.2	123.1
120°	84.6	92.1	98.7	104.3	107.1	109.0	112.8	115.6	117.5	118.4
122.5°	80.8	88.4	94.9	100.6	102.4	104.3	108.1	110.9	112.8	113.7
125°	77.1	83.7	90.2	95.9	97.8	99.6	103.4	106.2	107.1	108.1
127.5°	73.3	79.9	85.5	91.2	93.1	94.9	98.7	100.6	102.4	103.4
130°	68.6	75.2	80.8	85.5	88.4	90.2	93.1	95.9	96.8	97.8
132.5°	64.9	70.5	76.1	80.8	82.7	84.6	88.4	90.2	92.1	92.1
135°	60.2	65.8	71.4	76.1	78.0	79.9	82.7	84.6	85.5	86.5
137.5°	56.4	62.0	66.7	70.5	72.4	74.3	77.1	79.0	79.9	80.8
140°	51.7	56.4	61.1	64.9	66.7	68.6	71.4	73.3	74.3	74.3
142.5°	47.0	51.7	56.4	60.2	62.0	63.0	65.8	66.7	67.7	68.6
145°	43.2	47.0	50.8	54.5	56.4	57.3	59.2	61.1	62.0	62.0
147.5°	38.5	42.3	46.1	48.9	50.8	51.7	53.6	55.5	56.4	56.4
150°	32.9	37.6	40.4	43.2	45.1	46.1	47.9	48.9	49.8	49.8
152.5°	28.2	32.0	35.7	38.5	39.5	40.4	42.3	43.2	44.2	44.2
155°	23.5	26.3	30.1	32.9	33.8	34.8	35.7	36.7	37.6	37.6
157.5°	18.8	21.6	24.4	27.3	28.2	29.1	30.1	31.0	31.0	32.0
160°	14.1	16.0	18.8	21.6	22.6	23.5	24.4	24.4	25.4	25.4
162.5°	10.3	12.2	14.1	16.0	16.0	17.9	18.8	19.7	19.7	19.7
165°	6.6	8.5	9.4	10.3	11.3	12.2	13.2	13.2	14.1	14.1
167.5°	3.8	4.7	5.6	6.6	6.6	7.5	7.5	8.5	8.5	8.5
170°	1.9	1.9	2.8	2.8	2.8	2.8	3.8	3.8	3.8	4.7
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)