

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: NEO-RAY

Report Number: P333177

Luminaire Tested: **S125DIP-S610D590U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333177  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S610D590U835-4F0-1E-UDD-F4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4622.4 lumens  
Efficiency: N/A  
Efficacy: 140.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse

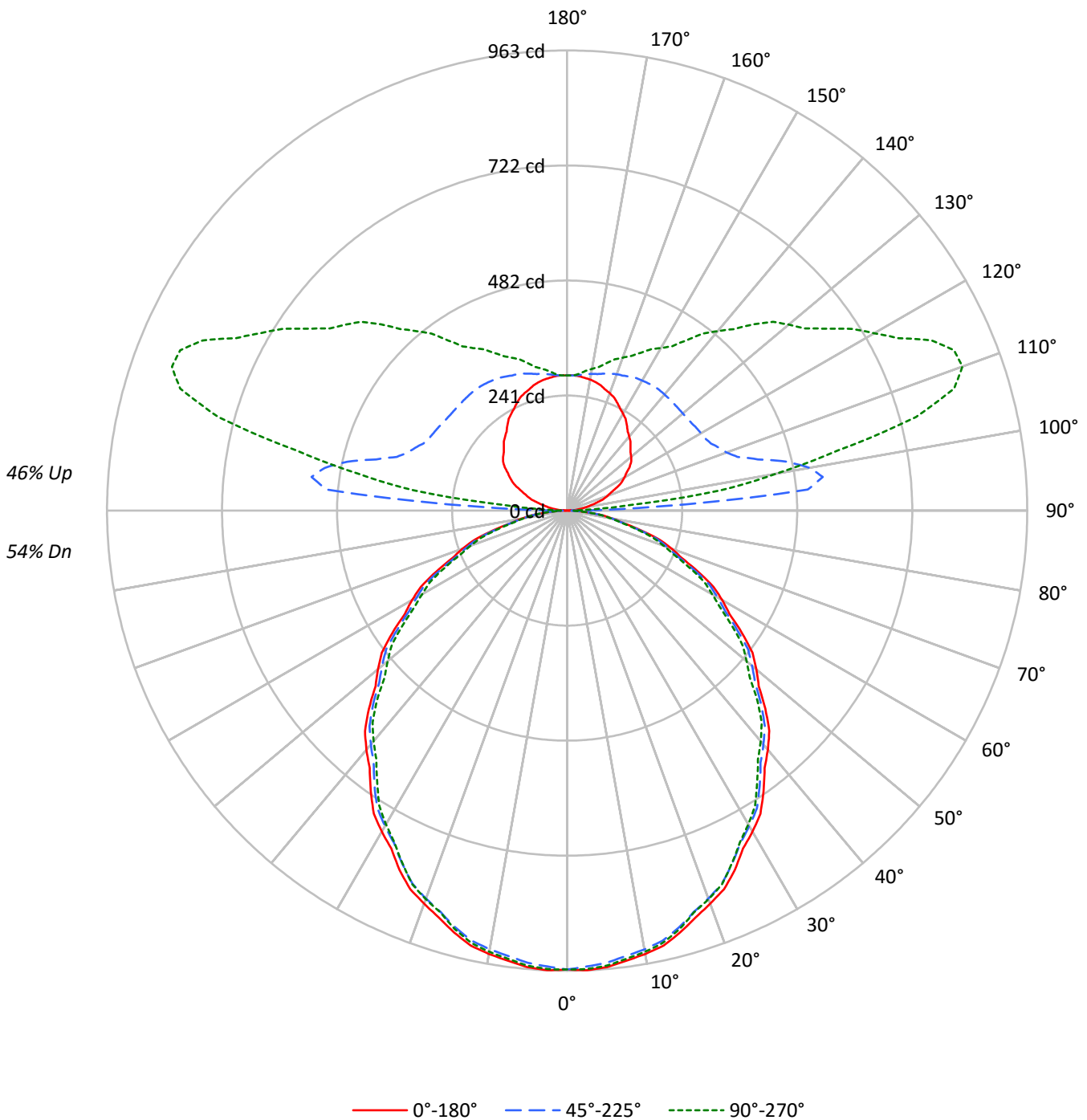
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	94	90	87	91	88	84	81	75	72	70	63	62	60	53	52	50	45
2	90	82	76	71	83	76	71	66	66	62	58	56	53	50	46	44	42	38
3	82	72	65	59	76	67	61	56	58	53	49	49	45	42	41	38	36	32
4	75	64	56	50	69	60	53	47	51	46	42	44	40	36	37	34	31	28
5	69	57	49	43	64	53	46	40	46	40	36	39	35	31	33	30	27	24
6	63	51	43	37	59	48	40	35	41	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	27	24	21	19
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17
9	51	38	31	26	47	36	29	24	31	26	22	27	23	20	23	20	17	15
10	47	35	28	23	44	33	26	22	29	24	20	25	21	18	22	18	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6203	6203	6203
5°	6217	6157	6196
10°	6178	6114	6149
15°	6111	6040	6066
20°	6016	5937	5948
25°	5912	5815	5810
30°	5785	5683	5655
35°	5649	5541	5463
40°	5509	5387	5311
45°	5358	5246	5142
50°	5191	5077	4924
55°	5031	4884	4748
60°	4839	4691	4525
65°	4609	4459	4308
70°	4390	4190	4047
75°	4000	3868	3735
80°	3559	3503	3418
85°	3097	3149	2986



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	2.0
10°-20°	255.8	5.5
20°-30°	377.7	8.2
30°-40°	440.7	9.5
40°-50°	442.6	9.6
50°-60°	388.5	8.4
60°-70°	289.5	6.3
70°-80°	165.5	3.6
80°-90°	49.7	1.1
90°-100°	205.1	4.4
100°-110°	440.9	9.5
110°-120°	413.8	9.0
120°-130°	335.3	7.3
130°-140°	269.1	5.8
140°-150°	203.1	4.4
150°-160°	142.9	3.1
160°-170°	84.3	1.8
170°-180°	27.4	0.6
0°-30°	724.0	15.7
0°-40°	1164.7	25.2
0°-60°	1995.9	43.2
0°-90°	2500.6	54.1
90°-120°	1059.7	22.9
90°-150°	1867.2	40.4
90°-180°	2122.0	45.9
0°-180°	4622.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	959	957	950	956	956	91
15°	914	911	903	907	907	257
25°	830	826	816	817	815	382
35°	716	713	703	699	693	448
45°	587	583	574	566	563	452
55°	447	444	434	427	422	399
65°	302	300	292	285	282	299
75°	160	159	155	153	150	171
85°	42	42	42	42	40	47
90°	1	5	9	12	13	3
95°	19	56	505	229	134	20
105°	64	90	414	814	756	68
115°	115	139	332	716	842	113
125°	160	187	318	569	663	142
135°	187	225	316	477	551	145
145°	218	250	317	395	435	137
155°	249	268	309	349	364	114
165°	272	279	297	315	319	76
175°	282	282	285	288	287	27
180°	283	283	283	283	283	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	962.8	962.4	962.0	961.6	961.2	960.3	959.0	957.6	956.3	954.9	956.3
5°	958.9	958.5	958.2	957.8	957.5	956.5	954.8	953.1	951.4	949.7	951.3
7.5°	950.0	949.7	949.4	949.0	948.7	947.6	945.7	943.9	942.0	940.2	941.6
10°	942.1	941.8	941.5	941.1	940.8	939.7	937.8	936.0	934.1	932.3	933.6
12.5°	932.4	931.8	931.2	930.6	930.0	928.8	927.1	925.4	923.6	921.9	923.0
15°	914.0	913.5	913.0	912.5	912.0	910.8	909.0	907.1	905.2	903.4	904.2
17.5°	892.9	892.2	891.4	890.7	889.9	888.6	886.7	884.7	882.8	880.9	881.9
20°	875.3	874.9	874.6	874.3	873.9	872.7	870.5	868.3	866.1	863.9	865.1
22.5°	857.6	857.0	856.4	855.8	855.2	853.9	851.8	849.8	847.7	845.6	846.4
25°	829.7	828.8	828.0	827.2	826.3	824.8	822.6	820.4	818.2	816.0	816.4
27.5°	797.0	796.5	796.0	795.5	795.0	793.6	791.3	789.1	786.8	784.6	784.6
30°	775.7	775.2	774.7	774.2	773.7	772.2	769.7	767.1	764.6	762.1	761.7
32.5°	752.6	751.9	751.1	750.3	749.5	748.0	745.8	743.5	741.2	739.0	738.4
35°	716.5	715.8	715.1	714.5	713.8	712.3	709.9	707.5	705.2	702.8	702.0
37.5°	678.9	678.1	677.3	676.4	675.6	674.0	671.8	669.6	667.3	665.1	663.9
40°	653.4	652.6	651.7	650.9	650.0	648.4	646.1	643.7	641.3	639.0	637.5
42.5°	626.1	625.4	624.6	623.9	623.2	621.7	619.3	617.0	614.6	612.2	610.9
45°	586.6	585.9	585.2	584.5	583.9	582.5	580.5	578.5	576.4	574.4	572.4
47.5°	544.0	544.0	544.1	544.1	544.1	542.9	540.5	538.1	535.7	533.2	531.2
50°	516.7	516.1	515.6	515.1	514.6	513.4	511.3	509.3	507.3	505.3	503.1
52.5°	488.7	488.3	488.0	487.6	487.2	485.9	483.8	481.6	479.5	477.3	475.4
55°	446.8	446.2	445.7	445.2	444.7	443.3	440.9	438.6	436.2	433.8	432.3
57.5°	402.5	402.3	402.0	401.7	401.5	400.3	398.3	396.3	394.3	392.4	390.4
60°	374.6	373.9	373.2	372.5	371.9	370.6	368.8	366.9	365.0	363.2	361.5
62.5°	345.4	344.9	344.3	343.8	343.2	342.2	340.6	339.0	337.4	335.8	334.0
65°	301.6	301.3	301.0	300.6	300.3	299.2	297.3	295.5	293.6	291.8	290.2
67.5°	259.2	258.5	257.8	257.1	256.4	255.4	254.0	252.6	251.2	249.8	248.5
70°	232.5	231.7	230.8	230.0	229.1	227.9	226.4	224.9	223.4	221.9	220.8
72.5°	203.3	202.7	202.2	201.6	201.0	200.2	199.3	198.3	197.3	196.3	195.2
75°	160.3	160.0	159.6	159.3	159.0	158.4	157.5	156.7	155.8	155.0	154.5
77.5°	120.7	120.5	120.4	120.2	120.1	119.8	119.3	118.9	118.4	117.9	117.6
80°	95.7	95.7	95.7	95.7	95.7	95.6	95.2	94.9	94.6	94.2	94.0
82.5°	73.9	73.6	73.3	73.0	72.8	72.6	72.5	72.5	72.4	72.3	72.0
85°	41.8	42.0	42.1	42.3	42.5	42.5	42.5	42.5	42.5	42.5	42.4
87.5°	16.5	16.6	16.9	17.1	17.3	17.5	17.5	17.6	17.5	17.6	17.7
90°	0.6	1.1	2.3	3.4	4.6	5.7	6.3	7.4	8.0	9.1	9.7
92.5°	7.0	8.4	13.2	20.3	30.1	46.8	77.9	130.2	186.9	183.9	148.9
95°	18.8	19.4	24.0	30.2	42.8	68.5	129.5	255.0	412.4	505.4	494.6
97.5°	31.3	31.9	35.1	41.4	52.7	71.2	111.6	203.5	368.3	539.7	625.8
100°	39.9	41.1	43.4	49.6	60.5	77.6	110.7	184.8	328.6	515.1	657.7
102.5°	49.5	50.2	52.0	58.8	68.7	85.3	114.8	177.1	298.4	471.7	638.5
105°	64.5	64.5	67.3	73.0	82.1	98.1	123.2	174.0	269.2	413.6	577.3
107.5°	79.1	80.2	82.9	87.6	97.1	111.5	135.8	179.2	256.9	373.5	514.8
110°	89.6	90.7	93.0	98.1	106.7	121.5	144.9	184.2	253.3	354.8	479.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	100.1	101.2	103.0	108.2	116.7	131.1	153.6	190.6	253.3	343.9	452.7
115°	115.2	116.4	118.1	123.2	131.8	146.0	167.1	200.2	255.0	332.0	423.8
117.5°	128.9	130.6	132.5	137.6	147.3	161.1	181.1	211.2	258.7	326.2	406.6
120°	138.0	139.8	142.0	147.2	156.9	171.1	191.1	218.5	262.4	323.4	397.0
122.5°	147.6	148.9	150.7	155.8	166.5	180.7	200.7	226.7	265.6	321.2	388.8
125°	159.7	160.9	163.7	168.8	179.7	194.5	213.3	237.9	271.0	318.3	377.6
127.5°	169.2	170.9	174.6	181.1	192.6	207.4	225.5	248.1	277.0	316.9	367.4
130°	175.1	176.8	181.4	188.8	200.8	215.6	233.3	255.0	280.7	316.0	360.5
132.5°	179.7	181.9	187.3	195.7	208.1	222.9	240.6	260.9	284.8	316.0	355.0
135°	187.1	189.4	196.2	205.4	217.3	232.7	250.4	269.2	290.3	316.0	348.5
137.5°	196.5	198.2	204.6	213.7	225.4	241.3	257.4	275.4	295.5	316.7	342.7
140°	201.9	203.6	210.5	219.6	230.5	245.9	262.4	279.5	297.8	317.2	340.0
142.5°	208.3	209.6	216.0	225.1	235.5	250.0	265.6	281.8	299.1	317.6	337.7
145°	217.9	219.0	224.7	232.7	243.0	256.1	271.0	285.2	300.6	317.2	334.3
147.5°	227.9	228.6	233.5	240.9	249.8	261.4	274.4	287.3	301.2	315.7	330.7
150°	233.9	235.0	239.0	246.4	254.4	264.1	276.7	288.6	301.2	314.3	328.0
152.5°	240.3	240.9	244.5	251.0	258.5	267.3	278.9	289.5	300.7	312.5	324.8
155°	248.7	248.7	252.1	257.8	263.5	271.5	281.2	290.3	299.5	309.2	319.4
157.5°	256.2	256.1	258.9	263.8	268.8	274.8	283.2	290.9	298.0	305.7	314.4
160°	261.3	260.7	263.0	267.0	271.5	276.7	284.1	290.9	296.6	303.5	310.3
162.5°	265.4	264.8	267.1	270.6	274.3	278.5	285.0	290.5	295.3	300.7	306.7
165°	271.5	270.4	272.1	274.9	277.2	280.7	285.2	289.8	293.2	296.6	301.2
167.5°	275.6	275.1	276.1	277.7	279.3	281.4	285.2	288.4	290.0	292.6	295.8
170°	278.4	277.8	278.4	279.5	280.7	282.4	285.2	287.5	288.6	290.3	292.6
172.5°	280.2	279.2	279.7	280.9	281.6	282.4	284.8	286.6	286.8	287.6	289.4
175°	282.4	281.2	281.8	282.4	282.4	282.4	284.1	285.2	284.6	284.6	285.2
177.5°	283.4	282.5	282.5	282.9	282.5	282.5	283.4	283.8	282.9	282.9	283.4
180°	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	960.4	960.4	960.4	960.4	960.4	960.4	960.4	960.4
2.5°	957.6	959.0	960.3	960.9	960.8	960.6	960.5	960.4
5°	952.8	954.3	955.8	956.5	956.3	956.2	956.0	955.8
7.5°	943.1	944.6	946.1	946.8	946.6	946.4	946.3	946.1
10°	935.0	936.3	937.7	938.3	938.1	937.9	937.7	937.6
12.5°	924.1	925.2	926.2	926.8	926.7	926.7	926.7	926.6
15°	905.1	905.9	906.8	907.2	907.2	907.2	907.2	907.2
17.5°	883.0	884.0	885.1	885.2	884.3	883.5	882.7	881.8
20°	866.2	867.4	868.6	868.8	867.9	867.1	866.2	865.4
22.5°	847.2	848.0	848.8	848.9	848.3	847.7	847.1	846.6
25°	816.7	817.0	817.4	817.3	816.8	816.3	815.8	815.3
27.5°	784.7	784.8	784.8	784.6	784.1	783.6	783.1	782.6
30°	761.4	761.1	760.7	760.3	759.8	759.3	758.8	758.3
32.5°	737.8	737.1	736.5	735.8	734.9	734.0	733.0	732.1
35°	701.1	700.3	699.4	698.3	697.0	695.6	694.3	692.9
37.5°	662.6	661.4	660.1	659.1	658.3	657.6	656.8	656.0
40°	635.9	634.4	632.9	631.9	631.4	630.9	630.4	629.9
42.5°	609.5	608.1	606.7	605.6	604.8	604.1	603.3	602.5
45°	570.3	568.3	566.3	565.0	564.5	564.0	563.5	563.0
47.5°	529.1	527.0	525.0	523.4	522.2	521.0	519.8	518.6
50°	500.9	498.7	496.5	494.8	493.6	492.4	491.2	490.1
52.5°	473.4	471.5	469.6	468.0	466.7	465.3	464.0	462.7
55°	430.8	429.3	427.8	426.4	425.2	424.0	422.9	421.7
57.5°	388.4	386.5	384.5	383.2	382.6	381.9	381.3	380.7
60°	359.8	358.1	356.4	355.0	353.8	352.6	351.4	350.3
62.5°	332.2	330.4	328.5	327.2	326.3	325.3	324.4	323.5
65°	288.7	287.2	285.7	284.6	283.9	283.2	282.6	281.9
67.5°	247.3	246.0	244.7	243.8	243.4	243.0	242.6	242.2
70°	219.8	218.8	217.8	217.0	216.3	215.6	214.9	214.3
72.5°	194.0	192.9	191.7	190.8	190.1	189.5	188.8	188.1
75°	154.0	153.5	153.0	152.4	151.7	151.0	150.4	149.7
77.5°	117.3	117.0	116.7	116.3	115.8	115.4	114.9	114.4
80°	93.9	93.7	93.5	93.3	92.9	92.6	92.3	91.9
82.5°	71.7	71.4	71.1	70.9	70.9	70.8	70.7	70.7
85°	42.2	42.0	41.9	41.6	41.3	40.9	40.6	40.3
87.5°	17.9	18.0	18.1	18.2	17.9	17.6	17.5	17.2
90°	10.3	10.8	11.4	12.5	12.5	12.5	13.1	13.1
92.5°	101.1	73.4	55.2	46.8	39.5	38.1	37.3	36.4
95°	410.1	323.4	253.3	205.4	164.9	147.7	143.2	134.1
97.5°	610.8	550.0	481.7	415.0	379.8	347.8	331.3	324.0
100°	701.6	673.7	614.9	555.6	516.2	475.2	454.1	444.9
102.5°	732.2	749.4	721.2	681.1	639.0	609.8	586.9	580.0
105°	714.2	792.3	817.4	811.1	792.9	774.1	762.7	755.8
107.5°	649.8	754.1	818.6	848.3	857.6	857.5	853.7	849.1
110°	602.4	710.8	791.2	839.7	865.3	876.2	880.2	880.2





TEST NUMBER: P333177

CATALOG NUMBER: S125DIP-S610D590U835-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	565.0	667.9	749.2	806.4	843.9	862.5	872.4	876.5
115°	517.9	606.4	684.5	746.7	791.2	818.6	834.5	842.0
117.5°	487.6	563.8	631.1	688.2	732.7	761.0	776.8	781.4
120°	471.2	539.6	602.4	652.6	694.8	722.2	737.6	742.1
122.5°	458.9	522.3	578.2	625.2	662.8	687.9	703.3	707.4
125°	440.9	499.1	548.8	589.8	621.8	645.2	657.7	663.4
127.5°	422.7	477.0	523.3	561.8	590.7	611.4	623.2	625.8
130°	411.3	461.5	506.0	543.0	571.6	590.4	601.8	605.2
132.5°	399.9	446.9	487.3	523.0	551.5	570.3	580.8	584.7
135°	385.0	424.4	460.9	493.4	518.5	537.3	547.6	551.0
137.5°	372.5	404.3	434.7	462.3	484.7	501.9	511.3	515.1
140°	365.6	392.5	418.7	442.7	463.8	478.6	487.1	490.0
142.5°	359.7	382.4	405.0	425.8	443.7	456.2	464.3	466.7
145°	352.0	369.6	387.3	402.7	416.4	426.1	432.4	434.7
147.5°	344.7	359.0	372.6	384.2	395.1	402.8	406.5	407.5
150°	340.5	353.1	363.9	374.2	382.8	389.6	391.9	392.5
152.5°	336.0	347.2	357.1	365.1	372.3	377.7	380.0	380.6
155°	329.1	338.3	346.2	352.5	358.2	362.2	363.9	364.5
157.5°	322.3	329.8	336.0	340.9	345.3	348.6	350.2	350.1
160°	317.7	323.4	329.1	333.1	337.1	340.0	341.1	340.5
162.5°	312.7	318.0	322.7	326.3	329.4	331.8	332.0	331.9
165°	305.7	309.7	313.2	316.0	318.3	319.4	319.4	319.4
167.5°	299.1	301.8	304.4	306.4	307.6	308.6	308.1	308.0
170°	295.5	297.2	298.9	300.0	301.2	301.8	301.8	301.2
172.5°	291.4	293.1	294.3	295.0	295.3	296.3	295.4	294.8
175°	286.9	286.9	288.1	288.1	288.1	288.6	287.5	286.9
177.5°	283.8	284.3	284.3	284.3	283.8	284.3	282.9	282.9
180°	282.9	282.9	282.9	282.9	282.9	282.9	282.9	282.9

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