

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: P332129-927

Luminaire Tested: **S123DIW-S560D755U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332129-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S560D755U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3948.0 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

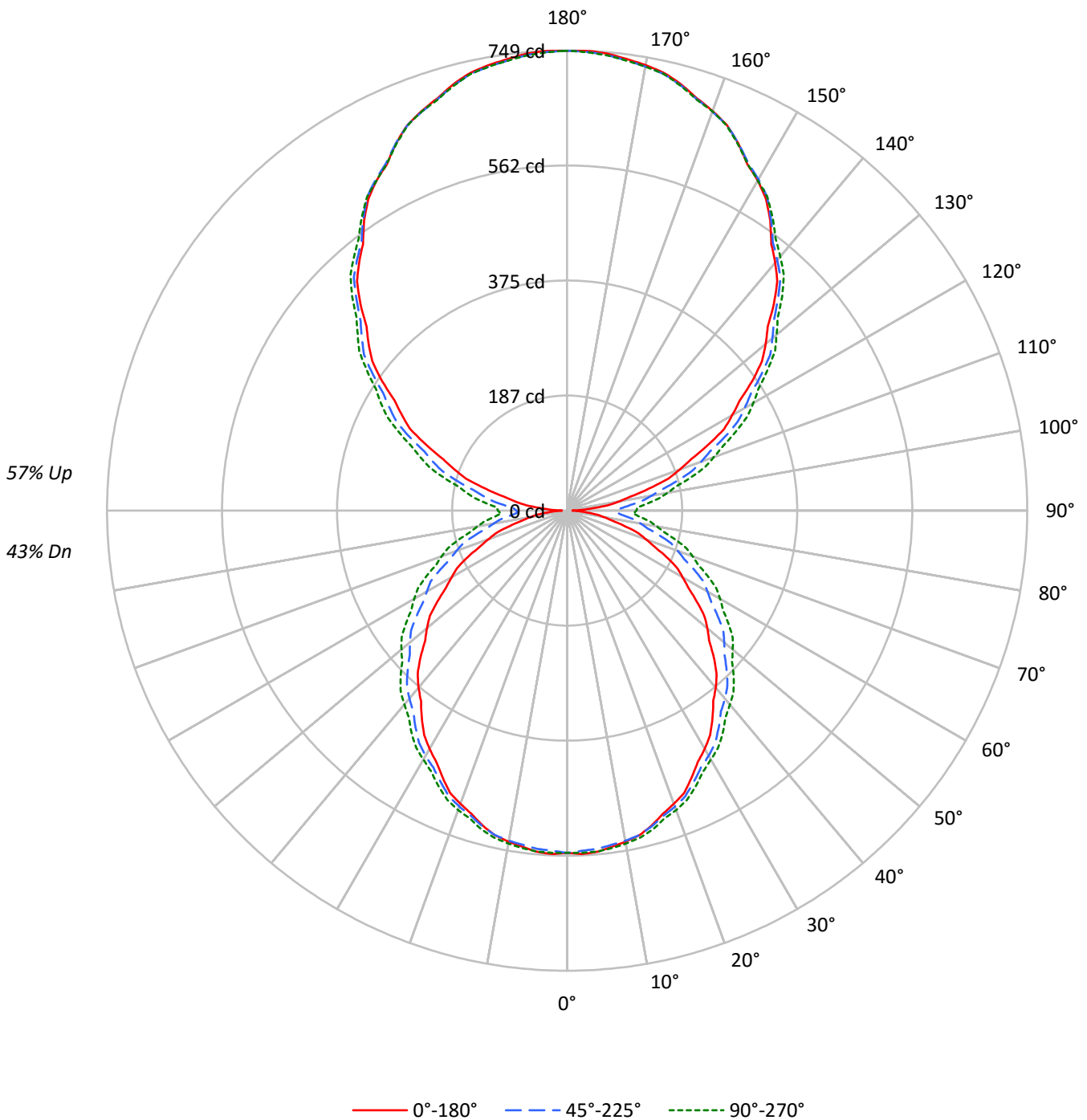
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43				
1	95	91	86	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35				
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28				
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24				
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20				
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17				
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13				
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11				
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.3
10°-20°	150.5	3.8
20°-30°	225.2	5.7
30°-40°	268.9	6.8
40°-50°	281.3	7.1
50°-60°	264.0	6.7
60°-70°	220.5	5.6
70°-80°	157.8	4.0
80°-90°	96.3	2.4
90°-100°	107.8	2.7
100°-110°	189.3	4.8
110°-120°	277.2	7.0
120°-130°	343.1	8.7
130°-140°	374.4	9.5
140°-150°	362.3	9.2
150°-160°	303.7	7.7
160°-170°	202.2	5.1
170°-180°	70.8	1.8
0°-30°	428.5	10.9
0°-40°	697.4	17.7
0°-60°	1242.7	31.5
0°-90°	1717.2	43.5
90°-120°	574.3	14.5
90°-150°	1654.1	41.9
90°-180°	2231.0	56.5
0°-180°	3948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	8	44	83	105	113	8
95°	41	70	104	124	131	44
105°	137	154	184	201	208	147
115°	253	263	283	297	302	250
125°	368	370	386	396	398	328
135°	476	479	485	493	495	366
145°	576	577	579	583	583	360
155°	659	659	660	662	658	303
165°	718	716	716	719	716	202
175°	747	745	744	748	744	71
180°	748	748	748	748	748	



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.2	23.2	30.2	37.2	44.2	51.3	58.5	65.7	72.9	80.2	84.8
90°	8.5	16.4	24.3	32.2	40.2	48.4	57.0	65.5	74.1	82.7	87.8
92.5°	21.6	28.5	35.3	42.1	49.0	56.3	64.1	71.8	79.5	87.3	92.1
95°	41.4	47.5	53.7	59.9	66.1	73.0	80.6	88.2	95.9	103.6	108.3
97.5°	67.6	73.0	78.4	83.8	89.3	95.5	102.6	109.6	116.7	123.8	128.4
100°	85.4	90.5	95.6	100.7	105.8	111.8	118.7	125.5	132.4	139.3	143.5
102.5°	106.1	110.4	114.8	119.1	123.5	129.2	136.2	143.1	150.0	157.0	161.2
105°	137.1	140.6	144.2	147.7	151.1	156.4	163.3	170.3	177.3	184.3	188.1
107.5°	172.6	175.5	178.5	181.3	184.3	188.7	194.7	200.7	206.6	212.6	216.7
110°	194.7	197.4	200.1	202.8	205.5	209.7	215.3	220.9	226.6	232.3	236.3



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.2	220.4	222.5	224.7	226.9	230.5	235.8	241.0	246.3	251.5	255.5
115°	252.9	254.9	257.0	259.0	260.9	264.3	268.9	273.5	278.1	282.7	286.0
117.5°	288.4	289.6	290.8	292.1	293.3	296.1	300.3	304.5	308.8	313.0	316.2
120°	310.0	311.4	312.8	314.3	315.8	318.4	322.2	326.0	329.8	333.6	336.6
122.5°	333.0	333.9	334.9	335.8	336.7	339.1	343.0	346.9	350.8	354.7	357.4
125°	367.6	368.0	368.4	368.8	369.2	371.1	374.8	378.4	382.1	385.7	388.0
127.5°	400.0	400.7	401.4	402.1	402.8	404.6	407.6	410.5	413.5	416.5	418.4
130°	421.7	422.6	423.5	424.4	425.3	426.9	429.2	431.5	433.8	436.1	438.2
132.5°	442.8	443.8	444.8	445.8	446.9	448.3	450.2	452.0	453.9	455.8	457.6
135°	475.7	476.3	477.1	477.7	478.3	479.3	480.7	482.0	483.4	484.7	486.6
137.5°	506.2	506.8	507.2	507.8	508.3	509.2	510.4	511.6	512.8	513.9	515.5
140°	526.9	527.5	528.1	528.8	529.5	530.0	530.6	531.2	531.6	532.2	534.1
142.5°	546.1	546.7	547.2	547.8	548.3	548.7	549.1	549.4	549.7	550.0	551.7
145°	576.2	576.4	576.5	576.6	576.8	577.0	577.4	577.8	578.2	578.6	579.6
147.5°	602.0	602.5	602.9	603.4	603.9	604.3	604.7	605.0	605.4	605.8	606.1
150°	620.4	620.6	620.8	621.2	621.4	621.6	621.9	622.2	622.4	622.7	622.7
152.5°	635.4	635.7	636.1	636.5	636.8	637.1	637.2	637.4	637.5	637.7	637.9
155°	659.2	659.2	659.2	659.2	659.2	659.2	659.3	659.5	659.6	659.7	660.3
157.5°	679.4	679.2	679.1	678.9	678.7	678.7	678.8	678.9	679.1	679.1	679.7
160°	692.1	691.8	691.6	691.3	691.0	690.9	690.9	690.9	690.9	690.9	691.6
162.5°	703.4	703.0	702.6	702.3	701.9	701.8	701.9	702.0	702.1	702.2	702.8
165°	718.0	717.6	717.2	716.8	716.4	716.1	716.1	716.1	716.1	716.1	716.9
167.5°	729.6	729.0	728.6	728.0	727.5	727.3	727.4	727.5	727.6	727.7	728.5
170°	736.2	735.6	735.1	734.6	734.0	733.8	733.8	733.8	733.8	733.8	734.7
172.5°	741.3	740.8	740.3	739.7	739.3	738.9	738.9	738.9	738.9	738.9	739.8
175°	746.7	746.2	745.7	745.2	744.7	744.4	744.4	744.4	744.4	744.4	745.2
177.5°	749.0	748.5	748.1	747.7	747.3	747.1	747.1	747.1	747.1	747.1	747.7
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	89.5	94.2	98.9	102.0	103.3	104.7	106.2	107.5
90°	92.9	98.0	103.1	106.5	108.1	109.7	111.3	112.9
92.5°	97.0	102.0	106.9	109.9	110.9	112.0	113.1	114.2
95°	113.0	117.7	122.4	125.4	126.7	128.1	129.4	130.8
97.5°	133.0	137.7	142.3	145.2	146.6	147.8	149.1	150.4
100°	147.8	152.1	156.5	159.4	161.0	162.6	164.2	165.8
102.5°	165.4	169.6	173.8	176.5	177.8	179.1	180.5	181.7
105°	191.9	195.6	199.4	202.0	203.5	204.9	206.4	207.9
107.5°	220.7	224.7	228.7	231.2	232.3	233.3	234.3	235.4
110°	240.3	244.4	248.4	250.8	251.7	252.5	253.3	254.1



TEST NUMBER: P332129-927

CATALOG NUMBER: S123DIW-S560D755U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	259.5	263.6	267.6	270.1	271.3	272.4	273.5	274.7
115°	289.4	292.7	296.1	298.3	299.2	300.2	301.1	302.1
117.5°	319.3	322.5	325.7	327.6	328.4	329.0	329.7	330.4
120°	339.5	342.5	345.5	347.3	348.0	348.6	349.4	350.1
122.5°	360.0	362.7	365.3	366.9	367.5	368.0	368.7	369.2
125°	390.4	392.7	395.0	396.3	396.7	397.2	397.6	398.0
127.5°	420.3	422.2	424.2	425.3	425.6	426.0	426.3	426.6
130°	440.2	442.2	444.3	445.2	445.1	445.0	444.9	444.8
132.5°	459.5	461.3	463.1	464.1	464.3	464.5	464.8	464.9
135°	488.5	490.4	492.3	493.5	493.9	494.3	494.7	495.2
137.5°	517.1	518.6	520.2	521.1	521.3	521.5	521.7	521.8
140°	536.0	537.9	539.8	540.6	540.3	540.1	539.9	539.6
142.5°	553.3	555.1	556.7	557.5	557.5	557.5	557.5	557.5
145°	580.5	581.5	582.4	582.9	582.9	582.9	582.9	582.9
147.5°	606.4	606.7	607.0	607.0	606.7	606.5	606.2	605.9
150°	622.7	622.7	622.7	622.4	621.9	621.4	620.9	620.4
152.5°	638.2	638.3	638.6	638.3	637.7	637.1	636.5	635.9
155°	660.8	661.3	661.8	661.6	660.7	659.8	658.9	658.0
157.5°	680.2	680.8	681.4	681.2	680.5	679.8	679.1	678.3
160°	692.2	692.8	693.5	693.6	693.1	692.5	692.0	691.5
162.5°	703.5	704.2	704.8	704.7	703.9	703.1	702.2	701.3
165°	717.7	718.5	719.3	719.2	718.4	717.4	716.5	715.6
167.5°	729.3	730.2	730.9	730.9	730.2	729.3	728.5	727.7
170°	735.6	736.6	737.4	737.4	736.6	735.6	734.7	733.8
172.5°	740.6	741.4	742.2	742.2	741.2	740.4	739.4	738.6
175°	746.0	746.7	747.5	747.5	746.6	745.6	744.7	743.8
177.5°	748.4	749.0	749.6	749.6	748.8	748.1	747.3	746.6
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5

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