

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: P332629-927

Luminaire Tested: **SA4XXDIP-C1020D365U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332629-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1020D365U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

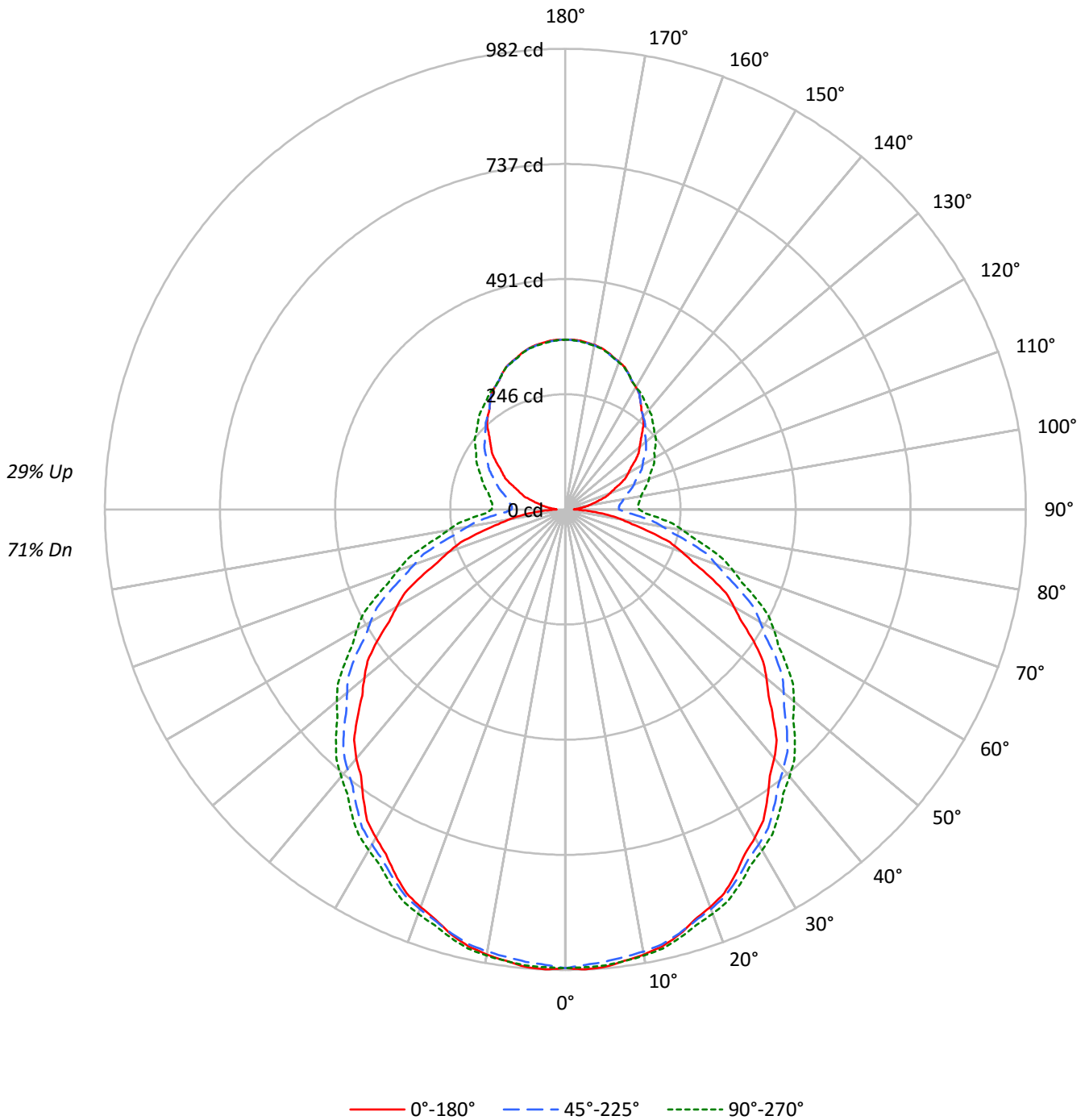
Lumens per Lamp: N/A
Luminaire Lumens: 4339.4 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 43.5
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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	71	
1	101	96	91	87	95	91	87	83	81	78	75	73	70	68	64	63	61	61	61	61	57	
2	91	83	76	70	86	79	72	67	70	65	61	63	59	56	56	53	50	50	50	50	46	
3	83	73	64	58	78	69	61	55	62	56	51	55	50	46	49	45	42	42	42	42	39	
4	76	64	55	49	71	61	53	47	55	48	43	49	44	39	44	39	36	36	36	36	33	
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	35	31	31	31	31	28	
6	64	51	42	36	60	49	40	35	44	37	32	39	34	30	35	31	27	27	27	27	24	
7	59	46	37	31	56	44	36	30	40	33	28	36	30	26	32	28	24	24	24	24	22	
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	30	25	21	21	21	21	19	
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	19	19	19	17	
10	48	35	27	22	45	34	26	22	31	24	20	28	23	19	25	21	17	17	17	17	16	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7896	7896	7896
5°	7920	7717	7739
10°	7872	7591	7585
15°	7802	7444	7404
20°	7695	7284	7227
25°	7575	7102	7034
30°	7445	6922	6835
35°	7299	6739	6660
40°	7181	6564	6478
45°	7007	6402	6322
50°	6859	6215	6158
55°	6707	6040	5964
60°	6469	5816	5788
65°	6208	5578	5571
70°	5894	5303	5319
75°	5453	5001	5089
80°	4964	4711	4865
85°	4347	4456	4735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	2.1
10°-20°	265.4	6.1
20°-30°	401.3	9.2
30°-40°	485.5	11.2
40°-50°	513.3	11.8
50°-60°	483.1	11.1
60°-70°	400.8	9.2
70°-80°	281.5	6.5
80°-90°	160.2	3.7
90°-100°	118.4	2.7
100°-110°	140.7	3.2
110°-120°	167.0	3.8
120°-130°	184.8	4.3
130°-140°	189.2	4.4
140°-150°	177.0	4.1
150°-160°	146.9	3.4
160°-170°	97.7	2.3
170°-180°	34.2	0.8
0°-30°	759.3	17.5
0°-40°	1244.8	28.7
0°-60°	2241.1	51.6
0°-90°	3083.6	71.1
90°-120°	426.0	9.8
90°-150°	977.0	22.5
90°-180°	1256.0	28.9
0°-180°	4339.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	979	976	968	976	976	93
15°	939	940	936	946	945	264
25°	859	865	868	880	882	395
35°	751	764	776	790	794	470
45°	626	647	668	686	692	484
55°	491	514	546	568	575	437
65°	340	375	412	438	448	336
75°	188	229	275	304	315	200
85°	58	104	153	185	197	62
90°	18	65	115	147	157	13
95°	31	70	116	146	157	30
105°	75	98	139	166	177	80
115°	129	140	173	196	204	127
125°	182	183	208	228	234	163
135°	232	234	241	257	264	179
145°	280	280	280	286	290	175
155°	319	319	319	320	319	147
165°	347	347	346	348	347	98
175°	361	360	360	362	360	34
180°	362	362	362	362	362	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	981.6	981.0	980.4	979.9	979.2	978.2	976.6	975.1	973.5	971.9	973.3
5°	979.1	978.4	977.7	977.0	976.3	975.0	973.4	971.6	969.9	968.2	970.2
7.5°	970.8	970.4	969.9	969.6	969.1	968.2	966.8	965.4	963.9	962.5	964.7
10°	963.8	963.6	963.4	963.1	962.9	962.1	960.9	959.7	958.5	957.3	959.5
12.5°	954.2	954.2	954.1	954.0	954.0	953.5	952.8	951.9	951.1	950.2	952.3
15°	938.7	938.9	939.1	939.4	939.6	939.4	938.7	937.9	937.2	936.4	938.7
17.5°	917.4	918.1	918.9	919.6	920.4	920.6	920.4	920.4	920.2	920.0	922.3
20°	902.5	903.2	904.0	904.7	905.5	905.9	906.2	906.4	906.7	906.9	909.3
22.5°	885.8	886.8	887.7	888.7	889.5	890.3	890.7	891.1	891.5	892.0	894.5
25°	858.7	860.2	861.6	863.1	864.5	865.6	866.3	867.1	867.8	868.5	871.2
27.5°	828.5	830.6	832.7	834.9	837.0	838.7	839.8	840.9	842.0	843.1	845.7
30°	808.3	810.2	812.2	814.1	816.1	817.9	819.6	821.3	823.0	824.7	827.4
32.5°	786.4	788.8	791.1	793.4	795.7	797.9	799.8	801.7	803.6	805.5	808.5
35°	751.4	754.3	757.2	760.1	763.0	765.7	768.2	770.6	773.0	775.5	778.9
37.5°	716.1	719.5	722.8	726.2	729.5	732.7	735.7	738.7	741.8	744.8	748.2
40°	693.3	696.5	699.7	702.8	706.0	709.2	712.6	716.1	719.5	722.9	726.5
42.5°	667.0	670.6	674.1	677.7	681.2	685.0	689.0	693.0	697.0	701.0	705.0
45°	626.5	631.1	635.7	640.4	645.0	649.6	654.3	658.9	663.5	668.1	672.2
47.5°	587.7	592.5	597.2	602.1	606.8	611.9	617.2	622.6	628.0	633.3	637.5
50°	559.7	565.1	570.4	575.8	581.1	586.5	591.8	597.1	602.5	607.8	612.8
52.5°	531.6	537.0	542.3	547.7	553.1	558.8	564.9	571.1	577.2	583.4	588.2
55°	490.7	495.8	500.9	506.0	511.1	517.3	524.7	532.0	539.2	546.5	551.4
57.5°	444.9	451.2	457.6	463.9	470.2	477.0	484.3	491.5	498.8	506.0	511.8
60°	415.1	421.4	427.8	434.1	440.5	447.6	455.7	463.7	471.7	479.7	485.3
62.5°	386.2	393.1	400.1	406.9	413.8	421.3	429.4	437.4	445.4	453.4	459.1
65°	339.5	347.3	355.1	362.9	370.7	378.7	387.0	395.3	403.5	411.9	417.9
67.5°	294.6	302.9	311.2	319.5	327.7	336.3	345.2	354.0	362.9	371.8	378.0
70°	264.0	272.3	280.5	288.8	297.1	305.9	315.1	324.3	333.6	342.9	349.4
72.5°	234.2	242.6	251.1	259.6	268.1	277.2	287.0	296.8	306.7	316.6	322.9
75°	188.4	197.4	206.4	215.4	224.4	234.0	244.2	254.4	264.7	274.9	281.7
77.5°	145.7	155.2	164.8	174.3	183.9	193.9	204.7	215.4	226.1	236.8	243.7
80°	119.4	129.1	138.9	148.6	158.4	168.6	179.3	190.0	200.7	211.4	218.7
82.5°	93.1	103.2	113.4	123.5	133.6	144.0	154.7	165.4	176.2	186.9	194.3
85°	58.1	68.3	78.5	88.7	98.9	109.6	120.5	131.4	142.4	153.4	160.7
87.5°	32.6	42.6	52.8	62.8	72.9	83.3	94.0	104.8	115.6	126.3	133.5
90°	18.4	28.8	39.2	49.6	60.0	70.7	81.7	92.7	103.6	114.6	122.0
92.5°	22.7	32.2	41.7	51.3	60.8	71.0	81.8	92.6	103.5	114.2	121.4
95°	31.1	39.6	48.2	56.8	65.4	74.9	85.3	95.7	106.2	116.5	123.3
97.5°	42.2	49.6	57.0	64.3	71.7	80.6	90.9	101.4	111.8	122.2	128.7
100°	51.3	57.8	64.4	71.0	77.6	85.9	95.9	106.0	116.1	126.0	132.8
102.5°	61.6	67.2	72.8	78.5	84.1	91.9	101.6	111.5	121.3	131.1	137.7
105°	75.1	80.0	84.9	89.8	94.8	101.9	111.1	120.4	129.7	138.9	145.2
107.5°	91.3	95.5	99.5	103.5	107.7	113.9	122.5	131.1	139.7	148.2	154.3
110°	101.7	105.2	108.8	112.3	115.8	121.8	130.3	138.7	147.2	155.7	161.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	112.5	115.5	118.6	121.6	124.6	130.2	138.2	146.2	154.2	162.2	167.6
115°	128.7	130.8	133.0	135.2	137.4	142.3	150.0	157.6	165.3	172.9	178.2
117.5°	144.9	146.2	147.6	148.9	150.4	154.6	161.8	168.9	176.1	183.2	188.1
120°	155.0	155.9	156.9	157.9	158.9	162.8	169.7	176.6	183.4	190.3	194.9
122.5°	166.4	166.6	166.8	167.2	167.4	170.8	177.4	183.9	190.5	197.1	201.8
125°	182.1	181.9	181.6	181.4	181.2	184.0	190.0	196.1	202.1	208.1	212.6
127.5°	197.2	197.2	197.1	197.0	196.9	199.2	203.8	208.3	212.9	217.5	221.8
130°	207.1	207.0	207.0	206.9	206.8	208.7	212.6	216.6	220.5	224.3	228.6
132.5°	218.1	217.9	217.9	217.7	217.6	219.1	222.1	225.2	228.3	231.4	235.4
135°	231.5	231.8	232.2	232.6	233.0	234.0	235.7	237.4	239.1	240.8	244.5
137.5°	247.2	247.2	247.1	247.0	247.0	247.4	248.3	249.2	250.2	251.1	254.5
140°	257.8	257.6	257.5	257.4	257.3	257.4	257.6	257.9	258.1	258.3	261.4
142.5°	266.5	266.6	266.6	266.7	266.8	266.7	266.6	266.4	266.2	266.0	268.7
145°	279.6	279.6	279.6	279.6	279.6	279.7	279.7	279.8	279.9	280.0	281.3
147.5°	292.9	292.9	292.9	293.0	293.0	293.0	293.0	292.9	292.9	292.9	293.0
150°	300.9	300.9	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
152.5°	307.6	307.8	307.8	307.9	308.1	308.1	308.2	308.2	308.2	308.3	308.5
155°	319.1	319.1	319.1	319.1	319.1	319.1	319.0	318.9	318.9	318.9	319.1
157.5°	329.0	328.8	328.8	328.7	328.5	328.4	328.4	328.4	328.4	328.4	328.6
160°	334.8	334.7	334.7	334.6	334.5	334.5	334.5	334.4	334.3	334.2	334.5
162.5°	340.2	340.0	339.8	339.7	339.5	339.5	339.4	339.3	339.2	339.1	339.5
165°	347.4	347.2	347.1	346.8	346.7	346.5	346.3	346.3	346.1	346.0	346.3
167.5°	352.9	352.7	352.4	352.1	351.9	351.7	351.8	351.8	351.8	351.8	352.2
170°	356.1	355.8	355.5	355.1	354.8	354.7	354.7	354.8	354.9	355.0	355.3
172.5°	358.3	358.1	357.7	357.5	357.3	357.1	357.1	357.2	357.2	357.2	357.6
175°	361.4	361.1	360.8	360.4	360.1	360.0	359.9	359.8	359.8	359.7	360.1
177.5°	362.4	362.2	361.9	361.6	361.4	361.3	361.3	361.3	361.3	361.3	361.6
180°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	974.7	976.0	977.4	977.9	977.8	977.6	977.4	977.2
5°	972.1	974.1	976.0	976.8	976.6	976.4	976.1	975.9
7.5°	966.9	969.1	971.3	972.2	972.0	971.8	971.5	971.3
10°	961.6	963.8	966.1	967.0	966.8	966.5	966.3	966.1
12.5°	954.3	956.2	958.2	959.3	959.2	959.1	959.1	959.0
15°	940.9	943.0	945.2	946.2	945.9	945.7	945.5	945.2
17.5°	924.5	926.8	929.0	930.0	929.8	929.6	929.4	929.2
20°	911.7	914.2	916.6	917.8	917.8	917.8	917.8	917.8
22.5°	896.8	899.3	901.7	903.2	903.6	903.9	904.3	904.7
25°	873.9	876.5	879.2	880.7	881.0	881.2	881.5	881.7
27.5°	848.1	850.6	853.1	854.4	854.8	855.1	855.3	855.6
30°	830.1	832.7	835.4	837.0	837.5	838.0	838.5	839.0
32.5°	811.6	814.7	817.8	819.5	820.0	820.5	820.9	821.5
35°	782.3	785.7	789.1	791.2	791.9	792.6	793.4	794.1
37.5°	751.7	755.2	758.6	760.7	761.5	762.3	763.0	763.8
40°	730.2	733.8	737.5	739.8	740.8	741.7	742.8	743.7
42.5°	709.1	713.1	717.2	719.5	720.3	721.1	721.9	722.6
45°	676.4	680.6	684.7	687.4	688.6	689.8	691.0	692.2
47.5°	641.8	646.1	650.5	653.3	654.7	656.2	657.7	659.2
50°	617.6	622.5	627.3	630.5	632.0	633.4	634.9	636.4
52.5°	593.1	597.9	602.9	605.9	607.4	608.9	610.4	611.8
55°	556.3	561.2	566.0	569.2	570.6	572.1	573.5	575.0
57.5°	517.6	523.4	529.2	532.7	534.1	535.5	536.9	538.2
60°	490.9	496.5	502.1	505.9	507.9	509.8	511.7	513.7
62.5°	464.6	470.2	475.9	479.6	481.6	483.5	485.4	487.4
65°	424.0	430.1	436.2	440.2	442.1	444.1	446.0	448.0
67.5°	384.1	390.3	396.5	400.5	402.4	404.3	406.2	408.1
70°	355.9	362.5	369.1	373.3	374.9	376.7	378.3	380.1
72.5°	329.3	335.6	342.1	346.2	348.1	350.0	351.9	353.8
75°	288.5	295.3	302.1	306.7	308.9	311.1	313.2	315.4
77.5°	250.6	257.5	264.4	269.1	271.4	273.8	276.1	278.5
80°	226.0	233.3	240.6	245.2	247.2	249.1	251.0	253.0
82.5°	201.8	209.4	216.8	221.7	223.8	225.9	228.1	230.2
85°	167.9	175.2	182.5	187.4	189.9	192.3	194.7	197.2
87.5°	140.6	147.7	154.9	159.5	161.7	163.8	166.0	168.2
90°	129.4	136.9	144.3	149.1	151.1	153.2	155.3	157.3
92.5°	128.4	135.5	142.6	147.2	149.2	151.2	153.2	155.3
95°	130.1	136.8	143.6	148.1	150.3	152.4	154.6	156.9
97.5°	135.4	142.0	148.5	152.9	155.0	157.1	159.1	161.3
100°	139.4	146.2	152.9	157.1	158.8	160.5	162.2	163.9
102.5°	144.2	150.8	157.3	161.5	163.5	165.4	167.4	169.4
105°	151.5	157.7	164.0	168.2	170.3	172.5	174.6	176.7
107.5°	160.5	166.7	172.9	176.8	178.5	180.2	182.0	183.7
110°	166.6	172.1	177.5	181.3	183.5	185.6	187.7	189.9



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CATALOG NUMBER: SA4XXDIP-C1020D365U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	173.0	178.4	183.8	187.4	189.4	191.4	193.4	195.4
115°	183.5	188.9	194.2	197.6	199.2	200.9	202.6	204.1
117.5°	193.0	197.8	202.6	206.0	207.8	209.6	211.4	213.3
120°	199.4	204.0	208.5	211.8	213.9	215.9	218.0	220.1
122.5°	206.4	211.0	215.7	218.8	220.4	221.9	223.4	224.9
125°	217.1	221.7	226.2	229.1	230.4	231.7	233.1	234.4
127.5°	226.0	230.3	234.6	237.5	239.0	240.6	242.1	243.7
130°	232.8	237.1	241.4	244.1	245.3	246.5	247.7	249.0
132.5°	239.5	243.5	247.6	250.3	251.7	253.0	254.4	255.8
135°	248.3	252.1	255.9	258.4	259.7	260.9	262.2	263.5
137.5°	257.9	261.3	264.7	267.0	268.2	269.5	270.8	272.0
140°	264.5	267.6	270.8	272.8	274.0	275.2	276.3	277.5
142.5°	271.5	274.3	277.0	278.9	280.0	280.9	281.9	283.0
145°	282.7	284.2	285.5	286.6	287.4	288.2	289.0	289.8
147.5°	293.2	293.3	293.4	293.9	294.6	295.3	296.0	296.8
150°	301.0	301.0	301.0	300.9	300.9	300.8	300.7	300.6
152.5°	308.6	308.8	309.0	308.9	308.7	308.6	308.4	308.2
155°	319.3	319.6	319.8	319.8	319.6	319.3	319.1	318.9
157.5°	328.8	329.0	329.2	329.2	328.9	328.8	328.5	328.3
160°	334.6	334.8	335.0	334.9	334.6	334.3	334.0	333.7
162.5°	339.8	340.2	340.5	340.5	340.2	339.9	339.6	339.3
165°	346.7	347.1	347.5	347.5	347.3	347.1	346.8	346.6
167.5°	352.6	352.9	353.3	353.3	352.9	352.5	352.1	351.7
170°	355.7	356.1	356.5	356.4	356.0	355.5	355.1	354.7
172.5°	358.1	358.5	358.9	358.9	358.5	358.0	357.6	357.1
175°	360.6	361.0	361.5	361.5	361.0	360.6	360.1	359.7
177.5°	361.9	362.3	362.7	362.7	362.3	361.9	361.5	361.1
180°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9

(END OF REPORT)