

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: P332912-930

Luminaire Tested: **S124RDIP-S575D810U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332912-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S575D810U930-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4276.1 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

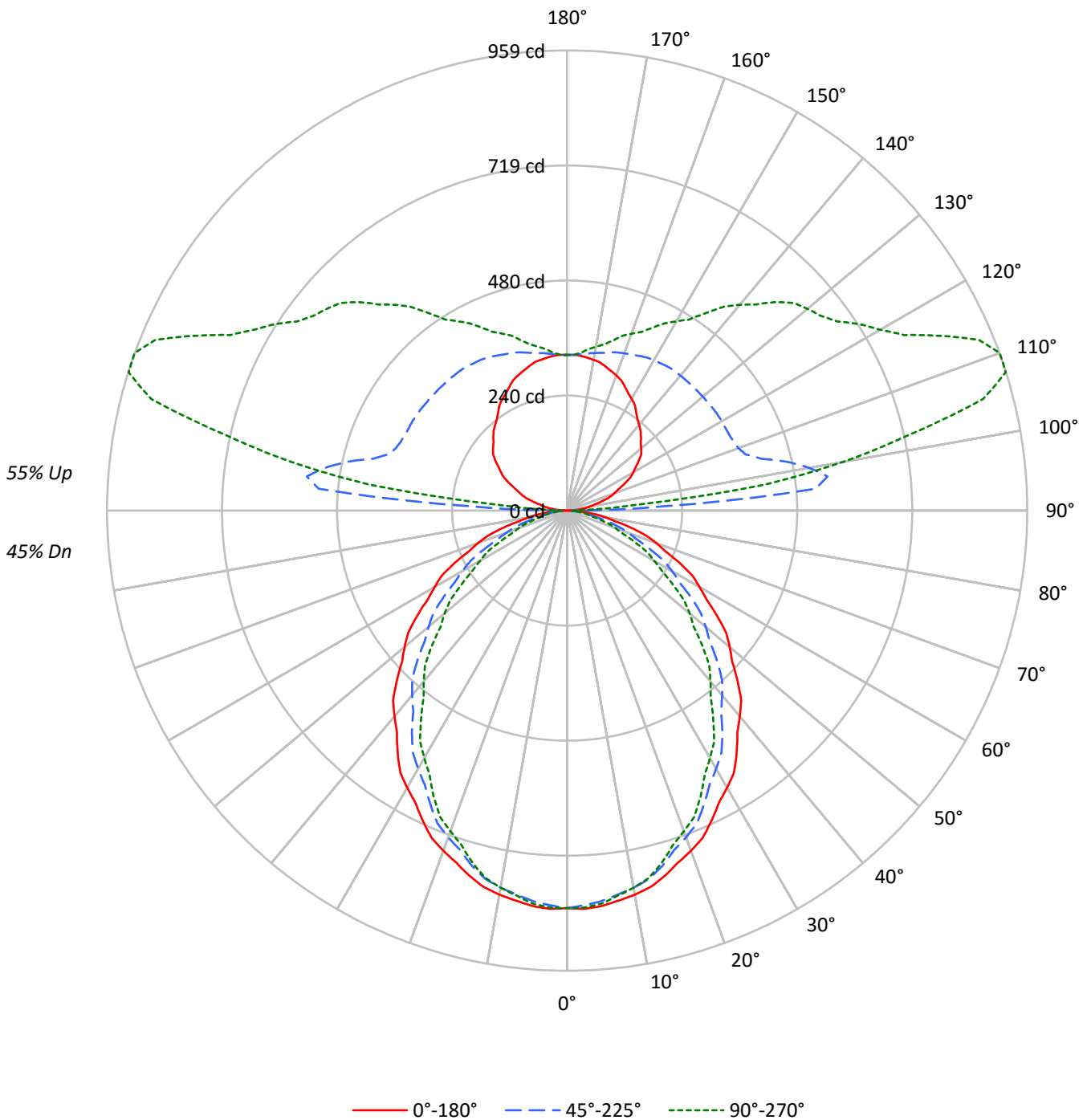
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332912-930

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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38
2	88	81	75	70	81	75	70	65	62	59	55	51	48	46	41	39	37	32
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28
4	74	63	56	50	68	58	52	47	49	44	40	40	37	34	32	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	27	24	21	18
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	21	18	16	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	1.8
10°-20°	217.0	5.1
20°-30°	313.4	7.3
30°-40°	355.3	8.3
40°-50°	343.1	8.0
50°-60°	285.3	6.7
60°-70°	197.0	4.6
70°-80°	99.8	2.3
80°-90°	27.4	0.6
90°-100°	234.4	5.5
100°-110°	487.8	11.4
110°-120°	436.9	10.2
120°-130°	367.5	8.6
130°-140°	306.4	7.2
140°-150°	234.1	5.5
150°-160°	164.6	3.8
160°-170°	96.8	2.3
170°-180°	31.5	0.7
0°-30°	608.3	14.2
0°-40°	963.6	22.5
0°-60°	1591.9	37.2
0°-90°	1916.1	44.8
90°-120°	1159.1	27.1
90°-150°	2067.1	48.3
90°-180°	2360.0	55.2
0°-180°	4276.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	1	5	12	13	13	3
95°	21	66	520	257	156	24
105°	75	108	418	900	897	80
115°	131	165	373	716	861	130
125°	183	217	371	610	687	163
135°	217	259	368	541	615	168
145°	250	287	366	456	502	157
155°	285	308	356	403	420	131
165°	310	320	341	361	367	88
175°	324	324	327	332	330	31
180°	324	324	324	324	324	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	11.8	11.2	10.6	9.9	9.0	8.6	9.2	9.1	9.3	9.4	9.1
90°	0.7	1.9	3.8	4.5	5.1	5.1	8.9	8.9	10.2	11.5	10.8
92.5°	7.3	10.6	16.6	24.4	33.7	46.9	79.3	128.7	177.0	202.2	168.4
95°	21.0	22.9	29.4	37.6	52.9	79.7	135.2	239.7	392.1	519.6	534.3
97.5°	37.7	37.7	43.2	50.9	64.0	86.4	129.1	215.5	367.0	547.2	671.2
100°	48.4	48.4	52.9	60.6	72.6	93.1	130.7	202.8	332.8	512.6	675.7
102.5°	58.6	59.7	63.6	70.8	82.3	101.7	135.7	199.2	309.8	469.2	637.5
105°	74.6	76.5	79.7	87.3	98.8	117.3	147.9	200.8	290.1	418.2	568.0
107.5°	92.2	93.4	96.6	104.8	115.8	134.0	162.1	210.3	286.5	389.6	511.9
110°	104.0	105.2	108.4	116.0	127.5	144.7	172.8	217.4	287.5	379.9	483.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.1	116.4	120.1	127.3	138.7	156.0	183.0	225.0	290.6	375.4	468.1
115°	131.3	133.2	137.7	144.1	156.2	173.4	198.9	237.2	296.4	372.9	453.2
117.5°	148.1	149.9	153.9	160.9	172.3	190.1	214.3	249.5	302.7	372.3	446.6
120°	159.4	160.6	165.1	172.1	183.0	200.8	225.0	258.2	307.3	372.3	443.0
122.5°	169.6	170.9	175.3	181.8	193.6	211.0	235.2	266.4	311.9	371.8	439.0
125°	183.0	185.5	189.3	196.3	208.5	226.3	249.2	278.6	318.8	371.0	432.2
127.5°	194.9	196.9	201.5	209.5	222.1	240.1	262.3	289.2	324.2	369.7	423.1
130°	201.5	204.0	209.1	218.7	230.8	249.2	270.9	295.8	328.3	369.1	417.6
132.5°	208.1	210.1	216.8	225.8	239.0	256.4	278.1	302.4	331.9	368.6	412.5
135°	217.4	220.0	226.3	237.2	250.5	267.1	288.1	311.1	337.2	367.9	404.8
137.5°	226.7	229.1	236.1	246.5	260.3	276.1	295.8	317.2	340.4	367.7	398.2
140°	233.3	235.2	242.2	253.1	266.4	281.8	300.9	321.3	343.0	367.2	394.6
142.5°	240.4	242.4	248.9	259.2	272.1	286.9	305.5	324.3	345.0	367.2	391.6
145°	250.5	252.4	258.9	267.7	279.9	293.9	310.5	327.7	346.2	365.9	386.3
147.5°	261.9	262.5	268.2	277.3	287.4	300.0	315.6	330.6	346.8	363.6	381.6
150°	269.0	269.7	274.8	282.4	292.0	304.1	318.1	332.2	346.8	362.1	378.1
152.5°	275.7	275.8	280.9	288.0	296.6	307.7	320.2	333.1	345.8	359.5	374.0
155°	284.9	285.6	289.4	295.8	302.8	312.3	323.2	334.0	344.2	355.7	367.9
157.5°	294.0	294.0	297.6	302.6	308.7	316.2	325.4	334.0	342.6	351.8	361.6
160°	299.6	299.6	302.1	306.6	311.8	318.8	326.4	334.0	341.0	348.7	357.0
162.5°	304.8	304.2	306.2	310.2	314.8	320.2	327.4	334.0	339.6	345.7	352.9
165°	310.5	310.5	311.8	315.0	318.1	322.0	327.7	332.8	336.6	341.0	346.2
167.5°	316.2	315.6	316.2	318.6	320.4	323.3	327.6	331.3	333.5	336.5	340.1
170°	318.8	318.1	318.8	320.7	322.0	323.8	327.0	330.2	331.5	333.4	336.0
172.5°	321.3	320.7	320.8	322.2	322.9	324.3	326.5	329.2	329.5	330.4	332.4
175°	323.8	323.2	323.2	323.8	324.5	324.5	325.8	327.7	327.0	327.0	328.3
177.5°	325.0	324.5	324.0	324.5	324.5	324.5	325.0	326.0	325.0	325.0	325.5
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	9.2	9.2	9.2	9.2	9.5	9.7	9.7	9.8
90°	11.5	12.1	12.7	12.7	13.4	14.0	13.4	13.4
92.5°	125.2	94.2	75.0	62.2	54.7	51.3	49.1	49.1
95°	472.4	373.6	288.1	226.3	195.1	175.3	163.9	155.6
97.5°	697.9	661.2	598.8	532.3	486.6	448.2	429.0	415.8
100°	768.8	781.5	750.3	703.2	647.7	608.8	589.7	584.6
102.5°	765.2	828.5	837.6	817.9	783.9	755.7	735.6	731.5
105°	714.0	824.3	887.4	913.5	914.8	909.7	900.8	897.0
107.5°	641.2	758.6	847.5	904.3	935.9	950.4	956.8	958.4
110°	597.4	707.6	800.1	870.2	915.4	942.2	953.7	959.4



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CATALOG NUMBER: S124RDIP-S575D810U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	565.2	662.8	750.1	820.2	871.6	904.0	920.1	929.4
115°	533.0	611.4	685.9	747.1	797.5	835.8	856.1	861.3
117.5°	517.1	582.0	640.7	692.6	735.6	767.7	788.3	792.3
120°	510.0	569.3	620.3	665.5	701.9	729.9	746.5	753.5
122.5°	503.9	561.1	607.6	647.2	677.9	701.9	715.9	722.9
125°	493.4	548.3	592.2	627.3	652.8	671.3	683.4	687.2
127.5°	480.7	533.0	576.9	610.3	635.9	652.3	662.5	666.3
130°	470.5	520.8	564.2	597.9	624.1	640.1	650.3	654.1
132.5°	459.7	507.0	549.4	583.2	608.8	626.8	636.5	640.3
135°	445.0	486.4	525.3	557.2	582.7	600.5	610.7	614.6
137.5°	431.6	466.7	499.5	528.2	552.0	569.6	578.0	582.7
140°	424.0	453.9	482.6	509.4	531.7	545.7	554.6	559.7
142.5°	416.8	443.2	467.8	491.0	510.8	523.7	531.7	535.2
145°	406.8	428.4	447.5	465.4	481.4	492.1	498.6	501.7
147.5°	398.4	415.6	431.0	445.0	456.7	466.0	470.8	472.0
150°	393.3	408.0	420.8	432.2	442.5	450.7	454.5	455.2
152.5°	387.8	400.3	412.1	421.5	430.2	436.9	439.2	439.9
155°	379.3	389.6	399.1	406.8	413.1	418.2	420.1	420.1
157.5°	370.2	378.8	386.9	393.0	397.8	401.6	402.8	402.8
160°	364.7	371.7	378.7	383.8	387.6	391.4	392.1	392.1
162.5°	359.1	365.0	370.6	375.1	377.9	381.7	382.4	381.9
165°	351.2	355.1	359.5	362.7	365.3	367.9	367.2	366.6
167.5°	343.7	346.7	350.3	352.1	353.4	355.1	355.0	354.4
170°	339.2	341.0	343.6	345.5	346.8	347.4	346.8	346.8
172.5°	335.1	336.5	338.0	339.4	340.1	340.8	340.1	339.2
175°	329.6	330.2	331.5	331.5	331.5	332.8	331.5	330.2
177.5°	326.0	326.5	326.5	327.0	326.5	327.0	326.0	325.0
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5

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