

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: P331931-930

Luminaire Tested: **S123DIP-S560D805U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331931-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4545.3 lumens
Efficiency: N/A
Efficacy: 118.4 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: Semi-Indirect

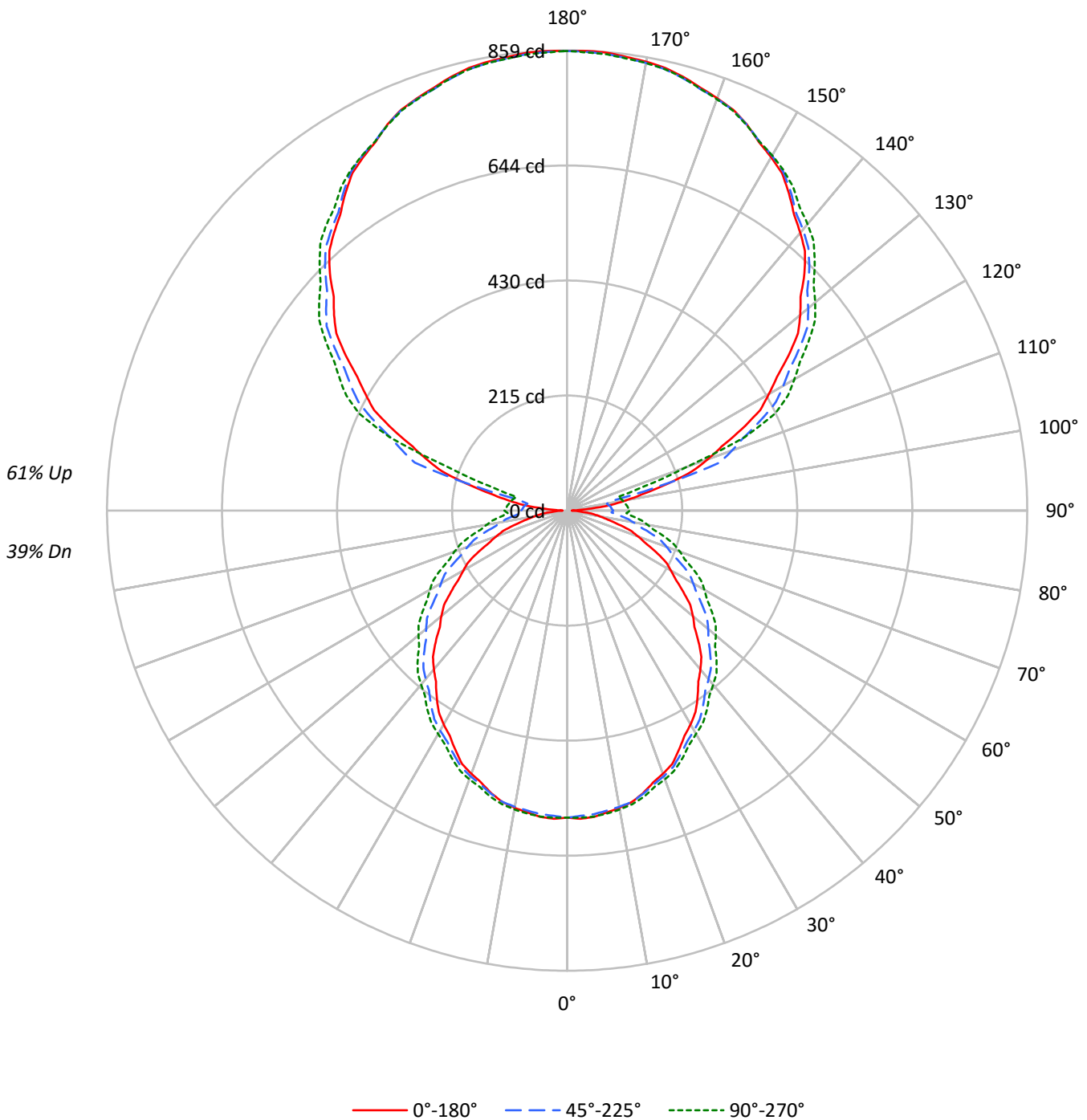
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331931-930

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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	94	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	66	77	71	65	61	58	54	50	45	43	40	34	32	31	25
3	78	68	61	55	70	62	56	50	51	46	42	40	36	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	39	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	34	30	32	28	25	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	22	19	17	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	32	26	21	27	22	18	22	18	15	17	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.2
10°-20°	154.9	3.4
20°-30°	231.7	5.1
30°-40°	276.7	6.1
40°-50°	289.5	6.4
50°-60°	271.7	6.0
60°-70°	226.9	5.0
70°-80°	162.4	3.6
80°-90°	99.2	2.2
90°-100°	91.9	2.0
100°-110°	193.3	4.3
110°-120°	386.9	8.5
120°-130°	471.7	10.4
130°-140°	493.5	10.9
140°-150°	456.0	10.0
150°-160°	366.5	8.1
160°-170°	236.5	5.2
170°-180°	81.5	1.8
0°-30°	441.0	9.7
0°-40°	717.7	15.8
0°-60°	1279.0	28.1
0°-90°	1767.5	38.9
90°-120°	672.1	14.8
90°-150°	2093.3	46.1
90°-180°	2778.0	61.1
0°-180°	4545.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	9	46	86	109	117	7
95°	46	46	82	104	112	53
105°	195	214	186	97	98	206
115°	360	372	399	420	428	355
125°	504	510	530	544	550	450
135°	627	630	639	652	654	482
145°	722	726	727	733	736	452
155°	795	794	794	797	794	366
165°	838	836	836	840	836	237
175°	858	855	855	859	855	82
180°	858	858	858	858	858	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.7	24.0	31.1	38.3	45.5	52.8	60.3	67.8	75.2	82.6	87.5
90°	8.7	17.0	25.2	33.4	41.7	50.2	59.1	68.0	77.0	85.9	91.2
92.5°	19.5	25.2	31.0	36.7	42.4	49.5	57.8	66.2	74.5	82.9	88.4
95°	45.7	45.3	44.9	44.6	44.2	48.2	56.5	64.9	73.2	81.6	86.9
97.5°	84.3	86.6	88.8	91.1	93.4	92.7	88.9	85.3	81.5	77.9	83.2
100°	113.3	120.6	127.9	135.2	142.4	138.2	122.5	106.8	91.1	75.3	80.6
102.5°	146.5	152.5	158.6	164.6	170.6	164.7	146.8	129.0	111.1	93.3	93.7
105°	194.9	199.8	204.7	209.6	214.5	213.5	206.8	200.0	193.2	186.5	165.3
107.5°	245.4	249.5	253.6	257.6	261.7	267.7	275.3	283.0	290.7	298.3	283.6
110°	279.1	282.7	286.3	290.0	293.6	299.0	306.1	313.2	320.3	327.4	326.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	311.8	314.8	317.9	321.0	324.0	329.0	335.9	342.8	349.7	356.5	360.1
115°	359.5	361.9	364.4	367.0	369.5	373.9	380.2	386.5	392.7	398.9	403.7
117.5°	406.1	408.1	410.3	412.3	414.4	418.1	423.5	428.8	434.1	439.4	443.9
120°	434.6	436.6	438.6	440.6	442.5	446.1	451.0	456.0	461.1	466.0	470.3
122.5°	464.2	465.6	467.1	468.5	469.9	473.0	477.9	482.8	487.7	492.6	496.4
125°	504.2	505.2	506.4	507.5	508.7	511.5	516.2	520.7	525.3	529.9	533.1
127.5°	543.4	544.4	545.4	546.4	547.4	549.9	553.9	557.9	561.9	565.9	569.2
130°	567.9	568.9	569.9	570.9	571.9	574.1	577.4	580.7	584.1	587.4	590.6
132.5°	590.8	591.9	593.0	594.2	595.3	597.1	599.8	602.5	605.2	607.8	610.9
135°	626.6	627.2	627.9	628.7	629.4	630.8	632.8	635.0	637.1	639.2	642.0
137.5°	657.0	657.9	658.9	659.9	660.9	661.9	663.1	664.3	665.4	666.6	669.5
140°	676.9	677.8	678.6	679.5	680.3	681.2	682.0	682.8	683.7	684.5	687.1
142.5°	695.8	696.5	697.2	698.0	698.7	699.4	699.9	700.3	700.9	701.4	703.7
145°	722.2	723.0	723.8	724.7	725.5	726.1	726.4	726.7	727.0	727.2	728.6
147.5°	746.4	747.1	747.7	748.4	749.0	749.5	749.7	750.0	750.3	750.6	751.2
150°	761.7	762.1	762.5	763.0	763.4	763.8	764.0	764.3	764.6	764.9	765.2
152.5°	775.4	775.7	775.8	776.1	776.2	776.4	776.6	776.7	777.0	777.1	777.6
155°	794.8	794.6	794.3	794.0	793.7	793.6	793.8	793.9	794.0	794.2	794.9
157.5°	809.8	809.8	809.8	809.8	809.8	809.7	809.5	809.4	809.3	809.1	810.0
160°	819.0	818.9	818.8	818.6	818.5	818.3	818.2	818.1	817.9	817.7	818.6
162.5°	827.7	827.4	827.0	826.6	826.2	826.0	825.8	825.7	825.6	825.4	826.4
165°	838.2	837.7	837.3	836.9	836.5	836.2	836.1	835.9	835.8	835.6	836.7
167.5°	846.4	845.8	845.2	844.7	844.1	843.8	843.8	843.8	843.8	843.8	844.9
170°	850.9	850.4	849.8	849.2	848.6	848.4	848.4	848.4	848.4	848.4	849.5
172.5°	853.9	853.3	852.6	851.9	851.3	851.0	851.1	851.2	851.3	851.4	852.6
175°	857.9	857.2	856.6	855.8	855.1	854.8	854.9	855.1	855.2	855.4	856.4
177.5°	858.9	858.4	857.9	857.3	856.7	856.5	856.6	856.7	856.8	856.9	857.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	92.3	97.1	102.0	105.1	106.6	107.9	109.4	110.9
90°	96.4	101.7	107.0	110.5	112.2	113.8	115.5	117.2
92.5°	93.9	99.5	104.9	108.4	109.9	111.3	112.8	114.2
95°	92.2	97.5	102.7	106.1	107.5	108.8	110.2	111.7
97.5°	88.4	93.7	98.9	102.3	103.9	105.4	106.9	108.4
100°	85.7	90.8	96.0	99.3	100.9	102.4	104.0	105.5
102.5°	94.1	94.5	94.9	95.9	97.5	99.2	100.9	102.5
105°	144.1	122.9	101.7	91.9	93.4	94.9	96.4	98.0
107.5°	269.0	254.3	239.6	223.5	205.8	188.2	170.5	152.8
110°	325.3	324.2	323.2	313.1	293.9	274.8	255.6	236.5



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CATALOG NUMBER: S123DIP-S560D805U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	363.7	367.3	370.9	371.1	368.1	365.0	362.0	358.9
115°	408.5	413.2	417.9	421.2	422.8	424.5	426.2	427.9
117.5°	448.3	452.7	457.2	460.0	461.2	462.4	463.6	464.8
120°	474.7	479.0	483.3	486.0	487.0	488.0	488.9	489.8
122.5°	500.3	504.3	508.1	510.5	511.7	512.7	513.8	514.9
125°	536.3	539.5	542.7	544.9	546.2	547.4	548.7	549.9
127.5°	572.3	575.5	578.7	580.7	581.3	582.0	582.6	583.3
130°	593.8	597.0	600.2	602.1	602.7	603.2	603.7	604.3
132.5°	614.0	617.1	620.2	622.1	622.6	623.1	623.7	624.2
135°	645.0	647.9	650.9	652.4	652.7	653.0	653.2	653.5
137.5°	672.4	675.2	678.1	679.8	680.2	680.6	681.0	681.4
140°	689.8	692.4	695.1	696.7	697.1	697.5	697.9	698.3
142.5°	706.0	708.3	710.6	711.9	712.2	712.6	712.8	713.1
145°	730.0	731.5	732.9	733.9	734.3	734.9	735.5	736.1
147.5°	751.9	752.4	753.1	753.3	753.2	753.0	752.8	752.7
150°	765.4	765.7	766.0	766.1	765.9	765.8	765.6	765.5
152.5°	778.1	778.6	779.2	779.1	778.5	778.0	777.3	776.7
155°	795.7	796.3	797.0	797.0	796.1	795.2	794.4	793.5
157.5°	810.8	811.6	812.5	812.4	811.3	810.2	809.1	808.0
160°	819.5	820.4	821.2	821.1	820.1	819.1	818.2	817.2
162.5°	827.4	828.3	829.2	829.3	828.4	827.5	826.7	825.8
165°	837.9	839.0	840.2	840.2	839.3	838.2	837.2	836.3
167.5°	846.0	847.2	848.3	848.3	847.2	846.0	844.9	843.8
170°	850.6	851.7	852.9	852.9	851.7	850.6	849.5	848.4
172.5°	853.7	854.8	856.0	855.9	854.7	853.5	852.2	850.9
175°	857.4	858.3	859.3	859.2	858.2	857.0	855.9	854.8
177.5°	858.8	859.7	860.5	860.5	859.3	858.2	857.0	855.9
180°	857.9	857.9	857.9	857.9	857.9	857.9	857.9	857.9

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