

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: P242830

Luminaire Tested: **S125DR-S375D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242830
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S375D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1294.2 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

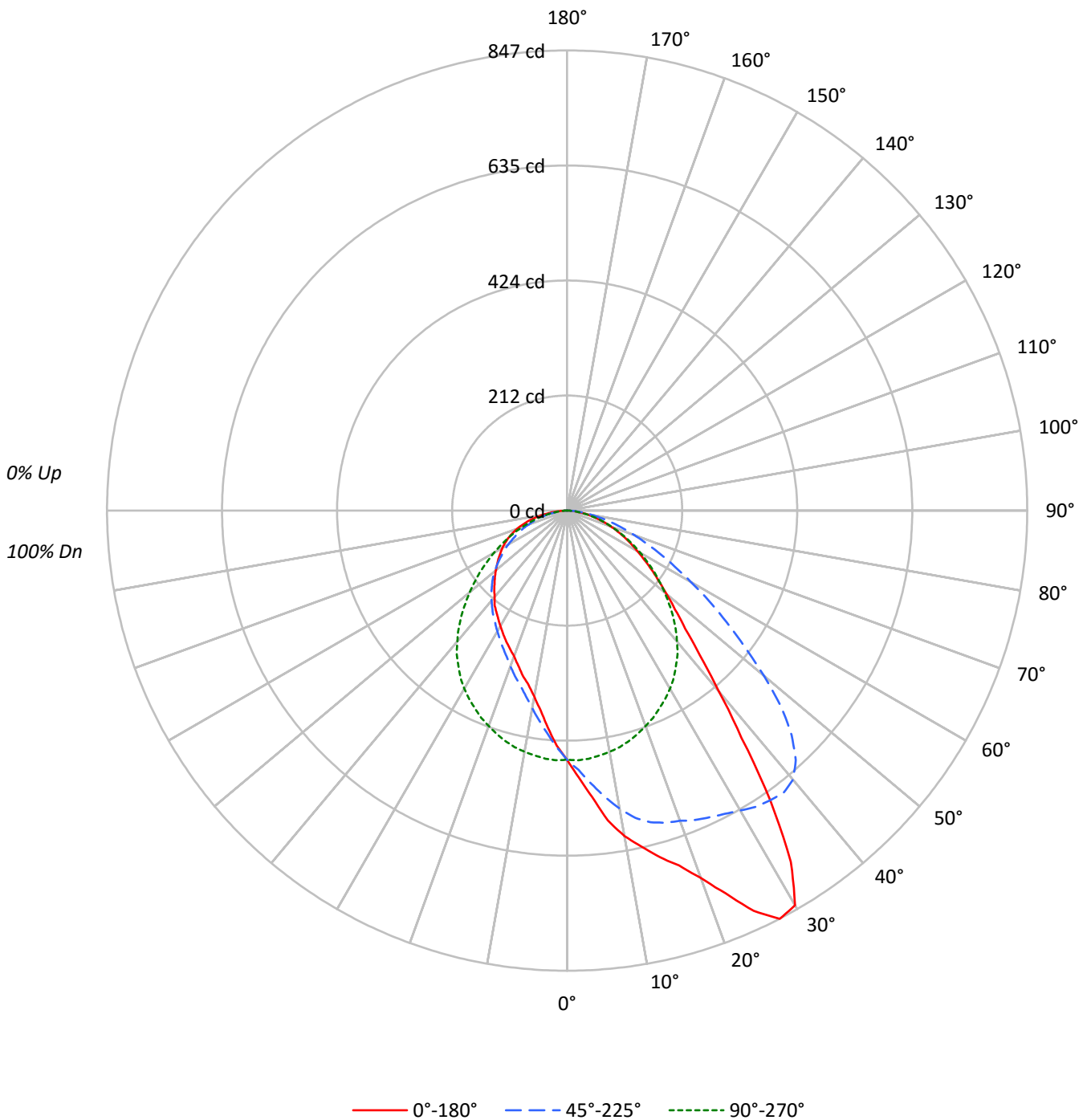
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93		95	92	90		91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78		84	80	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57		67	61	56		64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49		60	54	49		58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43		54	48	43		53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		46	39	34		44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31		42	36	31		41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28		39	33	28		38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3259	3259	3259
5°	3775	3270	2864
10°	4392	3253	2509
15°	4861	3230	2315
20°	5442	3192	2159
25°	6375	3149	2082
30°	6886	3107	2016
35°	5661	3028	1973
40°	4024	2919	1925
45°	3092	2770	1898
50°	2639	2587	1894
55°	2349	2408	1911
60°	2119	2210	1959
65°	1958	2013	2010
70°	1781	1808	2039
75°	1571	1593	2021
80°	1322	1297	1850
85°	1044	938	1492



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	3.4
10°-20°	131.5	10.2
20°-30°	213.6	16.5
30°-40°	261.0	20.2
40°-50°	236.8	18.3
50°-60°	188.6	14.6
60°-70°	131.4	10.1
70°-80°	70.0	5.4
80°-90°	17.4	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	389.2	30.1
0°-40°	650.2	50.2
0°-60°	1075.6	83.1
0°-90°	1294.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1294.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	459	459	459	459	459	
5°	529	504	458	412	401	53
15°	661	594	439	333	315	189
25°	813	623	402	279	266	372
35°	652	651	349	236	227	400
45°	308	584	276	196	189	245
55°	190	358	194	149	154	170
65°	116	190	120	101	120	115
75°	57	84	58	53	74	62
85°	13	17	12	12	18	15
90°	0	0	0	0	0	



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6
2.5°	491.7	490.9	490.2	488.6	489.8	486.5	484.9	482.2	478.9	477.7	476.3
5°	529.1	530.1	531.0	526.9	527.3	524.6	518.4	513.3	509.2	504.0	500.3
7.5°	575.4	572.5	572.7	570.2	565.7	562.0	556.0	547.6	540.0	531.4	524.0
10°	608.5	608.7	607.0	603.8	599.0	595.5	586.9	578.7	568.8	557.1	548.8
12.5°	633.4	634.4	632.1	627.6	625.8	616.9	610.7	600.5	588.3	579.5	565.7
15°	660.7	658.5	657.0	651.7	647.6	639.5	628.8	618.6	605.8	593.9	582.0
17.5°	684.8	686.6	684.0	680.1	668.1	658.5	645.3	632.5	617.1	602.3	588.5
20°	719.5	721.0	716.6	708.2	693.0	683.5	664.6	646.7	628.2	607.7	592.2
22.5°	762.7	760.7	754.3	740.5	727.8	708.2	687.4	664.6	640.2	616.5	594.5
25°	812.9	804.7	801.0	785.3	767.9	742.1	714.0	682.1	653.3	622.7	596.2
27.5°	847.2	843.9	838.6	825.8	805.9	776.5	743.4	705.3	666.5	629.1	595.9
30°	839.0	839.4	839.8	836.3	824.6	803.8	770.9	729.0	680.7	637.3	597.2
32.5°	766.6	775.3	783.7	794.6	801.6	801.8	784.3	747.5	697.5	646.7	596.4
35°	652.5	654.6	676.6	698.4	728.0	751.0	766.4	749.6	707.8	651.1	595.9
37.5°	527.5	538.2	554.8	579.3	623.7	659.9	707.4	723.8	704.1	654.8	595.7
40°	433.7	443.4	453.4	478.5	514.5	560.8	616.7	664.4	675.5	646.7	589.8
42.5°	361.3	368.5	379.8	397.1	425.7	465.4	518.2	584.2	629.3	622.9	577.6
45°	307.6	312.4	321.0	336.0	357.8	389.9	437.0	505.1	564.5	584.2	556.7
47.5°	269.4	269.6	276.6	287.3	303.9	333.5	368.7	424.8	488.8	534.2	527.7
50°	238.7	237.7	242.9	251.9	264.4	282.5	315.7	358.4	419.3	472.4	487.2
52.5°	212.2	212.6	215.3	221.3	231.3	246.1	268.8	306.2	356.0	410.9	442.1
55°	189.6	188.8	192.5	197.0	204.6	214.7	232.6	262.0	304.3	358.0	394.2
57.5°	167.8	169.9	171.5	174.6	181.2	188.2	204.2	226.8	261.6	309.3	347.7
60°	149.1	151.3	152.4	155.5	160.6	166.4	178.1	195.6	223.9	263.6	301.5
62.5°	132.4	133.9	134.1	136.8	140.7	146.4	155.0	169.0	189.8	223.3	260.3
65°	116.4	116.4	117.2	120.1	122.1	127.1	134.1	144.8	162.7	189.8	221.5
67.5°	100.8	101.8	101.6	103.0	104.7	109.0	114.3	123.2	137.4	157.9	184.2
70°	85.7	86.4	86.2	87.2	89.2	91.7	95.8	104.1	113.7	130.6	152.4
72.5°	72.0	72.2	71.6	73.0	74.0	76.1	80.8	84.3	93.0	106.7	123.6
75°	57.2	57.6	58.0	58.8	60.0	61.1	63.5	67.9	73.8	84.5	96.0
77.5°	45.6	44.6	45.7	45.6	46.1	47.1	49.2	51.8	56.8	64.0	73.6
80°	32.3	32.5	32.5	32.7	33.7	34.3	36.0	37.8	41.5	46.5	52.8
82.5°	21.4	22.0	21.6	22.0	22.8	23.2	23.9	25.3	27.1	30.8	34.8
85°	12.8	11.9	12.3	12.7	12.7	12.8	13.6	14.2	15.4	16.9	18.7
87.5°	4.7	5.1	5.3	5.3	5.5	5.5	6.2	6.2	6.8	7.4	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6
2.5°	475.2	473.8	472.2	469.5	466.2	464.5	461.7	460.0	456.5	453.6	450.4
5°	495.8	490.7	486.1	480.0	473.4	469.1	464.1	458.4	452.6	446.6	439.9
7.5°	516.4	508.1	498.9	489.4	480.0	471.3	463.1	454.7	447.1	437.6	429.6
10°	537.3	526.0	513.9	499.7	485.9	473.8	461.5	450.8	439.9	428.3	417.9
12.5°	558.1	542.1	523.8	507.9	490.5	475.4	460.4	446.0	431.6	418.3	405.9
15°	565.7	552.5	536.7	514.5	495.8	475.8	456.7	439.0	422.4	408.0	392.8
17.5°	573.1	556.1	539.4	518.0	493.7	472.1	450.4	431.2	412.9	394.8	381.0
20°	574.8	557.3	539.6	518.8	493.7	468.0	446.4	422.0	402.0	383.1	365.2
22.5°	574.3	553.8	534.2	512.5	488.2	465.0	437.8	412.9	390.7	372.2	353.3
25°	570.0	548.8	524.6	503.0	478.9	453.8	427.3	401.6	379.4	358.2	339.7
27.5°	567.4	540.6	514.1	489.2	466.0	442.9	417.2	390.7	366.4	344.7	327.6
30°	561.8	531.6	500.9	474.6	450.6	428.3	404.3	378.6	352.9	331.9	313.2
32.5°	556.7	520.3	487.4	458.2	432.5	410.9	389.3	365.2	340.1	318.7	300.0
35°	549.9	509.2	472.1	439.7	412.7	390.3	371.8	349.0	325.9	305.2	287.3
37.5°	541.9	494.8	455.5	421.8	392.4	369.1	351.6	333.8	310.7	290.4	274.5
40°	532.2	479.3	437.0	402.4	371.6	347.1	331.1	314.6	296.1	277.6	260.5
42.5°	519.9	465.2	418.3	380.4	350.0	326.3	309.3	295.9	280.1	263.2	247.6
45°	504.4	447.7	397.9	357.8	327.0	303.5	286.2	275.6	263.4	247.0	233.6
47.5°	483.7	427.9	376.5	335.0	303.3	281.5	264.9	254.6	245.7	232.8	220.2
50°	454.3	405.1	352.9	311.8	280.1	258.1	243.1	234.0	226.6	217.2	206.9
52.5°	421.4	376.5	329.8	289.3	257.9	236.3	221.7	213.9	208.1	202.1	191.9
55°	386.2	347.3	302.9	264.4	235.3	214.1	201.3	194.3	189.2	184.2	177.9
57.5°	348.2	316.7	276.0	240.0	213.2	193.3	181.2	174.0	169.9	167.2	163.3
60°	307.8	281.7	247.8	215.7	189.6	172.5	160.8	155.5	152.2	150.1	147.4
62.5°	270.2	249.9	219.2	190.6	168.6	152.6	142.5	137.4	134.3	133.5	131.4
65°	233.4	216.9	191.0	166.6	147.2	133.3	124.6	119.7	117.8	116.6	116.8
67.5°	196.4	185.7	164.1	142.7	126.7	114.5	107.3	103.6	102.6	100.8	100.8
70°	163.1	155.5	138.0	119.9	106.1	97.1	90.9	87.0	86.0	85.3	85.1
72.5°	133.7	127.3	112.7	99.1	87.0	79.4	74.6	72.6	70.9	70.5	70.5
75°	104.9	101.2	89.2	77.7	69.1	63.7	60.2	58.0	56.8	56.6	56.8
77.5°	79.2	75.7	67.4	58.8	53.1	48.9	45.6	45.0	43.4	43.6	43.2
80°	56.1	53.9	49.1	42.6	38.2	34.6	33.1	31.7	31.3	30.8	31.3
82.5°	36.8	34.5	31.5	28.0	24.5	22.8	21.2	21.0	20.8	20.6	20.6
85°	20.1	20.2	18.3	15.2	13.6	12.5	11.5	11.5	11.3	11.1	11.3
87.5°	8.6	8.2	7.4	6.8	5.8	5.3	5.1	5.3	4.7	4.5	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6	458.6
2.5°	448.7	446.6	444.8	440.9	438.8	435.8	433.5	436.0	433.3	434.5	432.7
5°	436.6	431.2	427.3	421.6	416.8	412.3	409.0	408.4	406.8	406.1	403.7
7.5°	422.2	416.0	409.6	402.6	396.7	390.5	386.8	383.3	381.1	378.4	376.3
10°	409.8	400.6	392.8	383.9	376.1	369.3	363.8	361.1	358.6	354.9	353.5
12.5°	394.4	384.8	374.9	365.2	357.8	350.0	345.5	341.0	339.5	335.2	335.0
15°	382.7	368.5	359.2	349.4	339.1	332.9	329.0	324.5	322.6	319.6	317.5
17.5°	368.3	355.5	343.8	333.8	324.5	319.4	314.4	311.3	308.0	305.8	302.3
20°	352.3	340.3	328.6	317.9	311.1	305.0	301.1	298.2	294.7	293.7	290.2
22.5°	338.9	325.3	314.2	305.6	298.0	291.0	286.7	285.0	282.8	279.3	279.3
25°	324.1	310.3	300.8	291.8	285.2	279.0	276.0	273.5	271.2	269.0	268.2
27.5°	311.7	299.4	287.7	279.5	273.9	268.0	265.5	262.2	260.5	258.7	256.4
30°	298.4	285.8	275.8	268.0	261.8	256.8	254.0	251.9	250.3	248.8	247.6
32.5°	284.8	273.3	263.8	256.2	249.9	246.4	244.1	242.7	241.0	239.0	237.5
35°	273.1	260.3	250.9	244.3	239.4	236.5	233.8	232.4	230.5	230.5	228.9
37.5°	259.3	248.0	239.6	233.6	229.3	226.6	223.5	222.7	221.3	220.6	220.0
40°	247.2	236.9	229.1	223.1	218.4	216.3	213.9	212.4	211.6	210.6	210.2
42.5°	234.8	225.0	217.6	212.2	208.3	206.5	204.4	203.4	201.7	200.3	200.1
45°	222.1	212.6	205.8	201.3	197.8	195.6	194.3	191.9	191.2	189.6	189.4
47.5°	210.4	201.1	194.3	190.6	187.5	185.9	183.8	181.2	180.3	179.3	179.1
50°	197.0	188.6	182.4	178.9	176.0	173.4	171.3	169.7	169.2	169.2	169.6
52.5°	183.4	176.6	171.5	167.0	164.3	161.6	159.6	158.8	157.9	159.0	159.8
55°	170.1	162.9	159.0	155.0	152.2	149.1	148.1	147.7	147.2	148.7	149.5
57.5°	155.9	151.1	146.4	142.1	139.8	137.8	136.3	136.1	137.2	137.6	140.0
60°	142.5	136.7	132.6	129.5	126.5	125.4	125.0	124.6	125.4	127.5	130.8
62.5°	127.7	123.2	118.7	116.6	114.7	112.5	112.5	112.9	114.7	117.2	120.5
65°	113.3	109.2	106.3	103.6	101.8	100.6	101.0	101.8	103.6	106.9	110.6
67.5°	98.5	95.8	93.0	90.5	88.8	89.0	89.2	90.1	92.3	96.2	99.7
70°	84.3	81.2	79.0	78.1	76.7	75.9	77.1	79.0	80.8	84.3	87.2
72.5°	70.1	67.5	66.0	65.4	65.0	64.4	64.6	66.8	69.3	72.8	76.3
75°	56.1	55.1	53.9	53.1	52.6	52.9	53.3	55.3	57.2	60.9	64.8
77.5°	43.4	42.2	41.5	41.3	40.9	41.1	42.0	43.6	45.6	48.3	51.4
80°	31.0	30.6	30.2	30.0	30.0	30.2	31.7	32.7	34.5	37.0	39.3
82.5°	20.4	20.2	20.2	20.2	20.4	20.4	21.2	22.6	23.9	25.7	27.6
85°	11.9	11.5	12.1	12.3	11.9	12.5	12.8	13.6	14.2	15.2	16.2
87.5°	4.9	5.3	5.1	5.3	5.3	5.6	5.5	6.2	6.6	7.0	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242830

CATALOG NUMBER: S125DR-S375D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	458.6	458.6	458.6	458.6
2.5°	431.6	432.9	431.8	433.3
5°	402.8	401.0	402.2	401.4
7.5°	376.1	374.5	372.2	371.4
10°	351.4	349.2	349.0	347.7
12.5°	333.3	331.3	328.6	328.2
15°	316.3	314.8	313.4	314.6
17.5°	301.9	300.6	300.2	299.0
20°	288.5	287.5	287.9	285.4
22.5°	277.8	275.6	275.3	275.3
25°	266.5	265.5	264.5	265.5
27.5°	256.6	255.6	255.2	255.4
30°	247.6	245.7	245.9	245.7
32.5°	237.9	236.7	236.3	235.9
35°	228.3	228.3	227.4	227.4
37.5°	219.6	219.4	218.8	219.2
40°	209.5	209.3	208.7	207.5
42.5°	199.7	198.9	198.7	198.6
45°	189.4	189.4	189.0	188.8
47.5°	179.3	179.7	180.5	180.3
50°	170.3	170.5	171.1	171.3
52.5°	160.4	161.8	162.5	162.3
55°	151.3	152.6	154.0	154.2
57.5°	142.1	143.9	145.2	145.6
60°	132.8	135.3	137.0	137.8
62.5°	123.8	126.7	128.5	128.5
65°	113.9	116.8	118.4	119.5
67.5°	103.6	106.5	108.0	109.0
70°	92.1	95.0	97.3	98.1
72.5°	80.8	83.3	85.1	86.0
75°	67.4	70.9	72.6	73.6
77.5°	54.5	58.0	59.0	59.6
80°	41.7	43.6	45.0	45.2
82.5°	29.6	31.1	31.3	31.9
85°	17.5	18.3	18.5	18.3
87.5°	7.2	7.0	7.0	7.4
90°	0.0	0.0	0.0	0.0

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