

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: P243670

Luminaire Tested: **S125DR-H375D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243670
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H375D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1471.1 lumens
Efficiency: N/A
Efficacy: 131.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

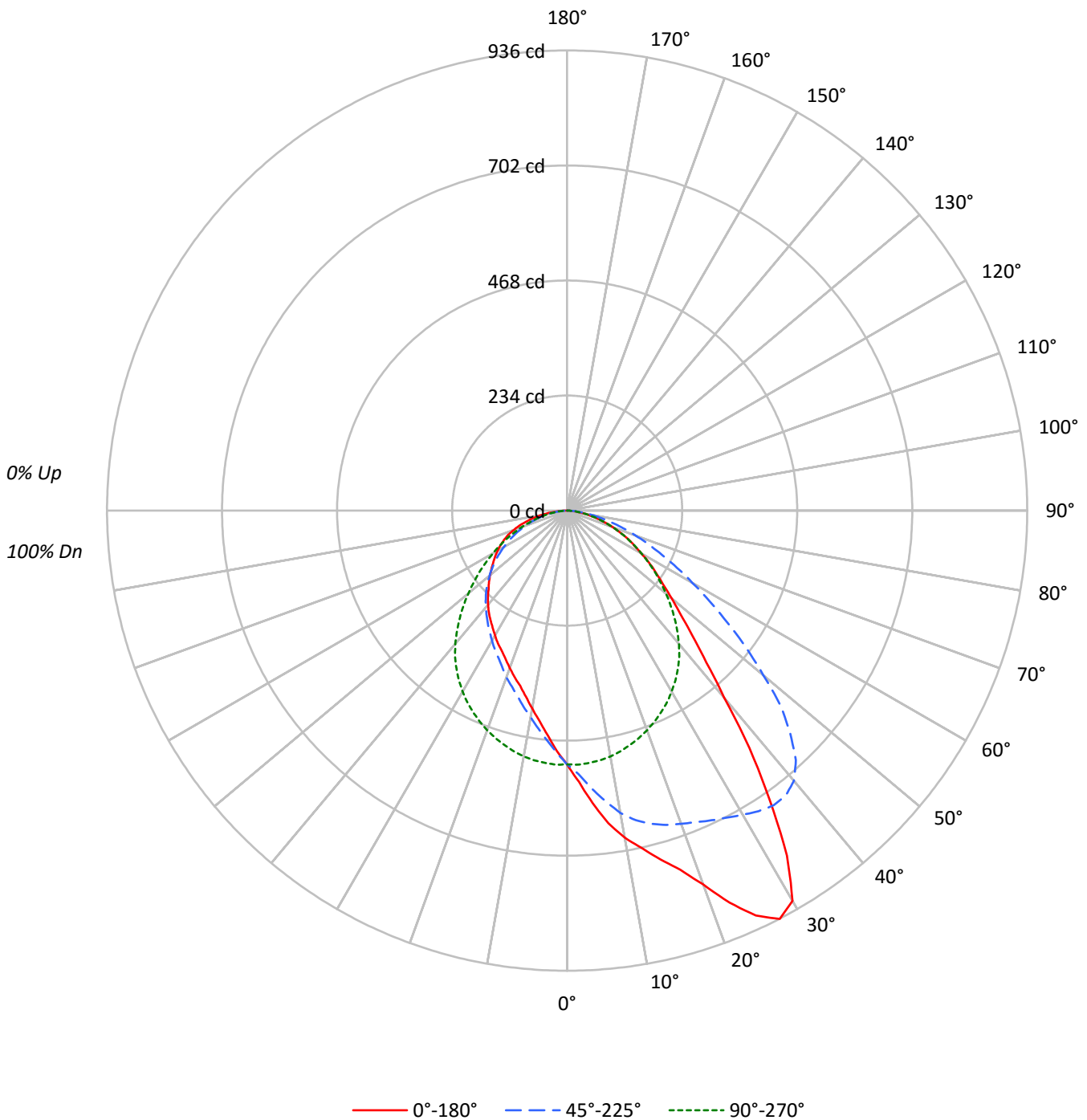
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243670

CATALOG NUMBER: S125DR-H375D835-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	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53
5	78	65	56	50	75	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	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	36	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°	3669	3669	3669
5°	4262	3676	3268
10°	4876	3665	2949
15°	5406	3631	2717
20°	6120	3595	2578
25°	7127	3549	2469
30°	7524	3490	2408
35°	6222	3406	2357
40°	4603	3282	2322
45°	3618	3103	2273
50°	3064	2902	2263
55°	2729	2703	2273
60°	2475	2482	2321
65°	2296	2274	2386
70°	2061	2036	2400
75°	1757	1788	2367
80°	1441	1465	2210
85°	987	1044	1876



TEST NUMBER: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.9	3.4
10°-20°	149.0	10.1
20°-30°	242.2	16.5
30°-40°	294.7	20.0
40°-50°	269.7	18.3
50°-60°	215.8	14.7
60°-70°	150.3	10.2
70°-80°	79.9	5.4
80°-90°	19.6	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°	441.1	30.0
0°-40°	735.8	50.0
0°-60°	1221.3	83.0
0°-90°	1471.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1471.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	516	516	516	516	516	
5°	597	567	515	469	458	59
15°	735	660	494	390	369	211
25°	909	695	452	330	315	415
35°	717	732	392	281	272	445
45°	360	642	309	233	226	284
55°	220	398	218	178	183	199
65°	136	213	135	119	142	134
75°	64	94	65	62	86	69
85°	12	18	13	14	23	16
90°	0	0	0	0	0	



TEST NUMBER: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	552.6	550.3	549.6	549.9	548.6	547.5	545.0	541.7	539.4	536.5	535.6
5°	597.4	591.7	592.8	591.1	588.4	584.8	581.7	576.6	571.8	567.2	561.2
7.5°	641.3	640.3	637.3	636.9	632.5	626.5	620.2	613.3	603.0	595.9	587.7
10°	675.6	677.7	673.6	673.8	666.0	659.9	654.5	645.5	634.0	624.4	612.4
12.5°	703.3	704.1	703.5	700.8	695.7	685.5	680.2	670.8	658.3	645.1	635.9
15°	734.7	732.4	728.8	725.5	718.1	710.8	699.9	688.8	672.9	659.7	646.3
17.5°	766.1	765.6	761.3	754.1	744.9	735.3	719.0	704.7	687.8	670.4	653.7
20°	809.2	806.9	800.4	792.2	775.3	761.7	741.4	721.9	699.7	677.9	658.5
22.5°	863.2	855.6	849.2	836.6	817.1	793.5	770.7	742.4	711.4	685.9	661.6
25°	908.8	905.5	898.6	884.5	862.3	833.9	800.0	767.9	729.0	695.1	663.5
27.5°	936.4	935.0	930.8	917.6	899.2	870.9	834.7	793.9	749.7	703.9	666.0
30°	916.8	917.0	919.3	917.8	909.6	891.4	859.2	818.2	767.1	714.4	666.6
32.5°	832.2	837.9	855.9	864.4	876.0	879.7	865.3	831.2	781.8	724.8	668.7
35°	717.1	730.9	743.0	768.2	798.1	822.6	836.8	825.7	787.8	731.9	669.8
37.5°	608.7	607.6	626.5	653.7	685.5	727.1	767.5	789.7	777.4	730.5	667.9
40°	496.1	505.7	517.4	541.5	578.7	630.0	678.2	725.7	742.8	717.5	660.6
42.5°	419.0	423.4	435.1	454.0	480.8	533.1	580.6	641.7	685.7	688.6	644.5
45°	360.0	364.8	368.2	386.8	411.7	446.9	495.6	557.2	616.2	641.7	618.3
47.5°	312.7	315.4	322.8	334.1	350.4	381.6	420.5	476.4	540.6	590.2	582.3
50°	277.1	279.2	285.1	291.4	304.8	327.8	359.2	405.0	466.8	521.0	538.8
52.5°	245.7	248.4	251.4	257.4	269.8	285.3	310.8	346.6	404.0	459.4	487.7
55°	220.2	221.2	224.4	229.0	238.4	250.1	270.4	302.9	343.1	398.3	437.2
57.5°	198.0	197.0	200.3	203.4	209.7	219.6	234.2	258.3	296.6	343.7	384.3
60°	174.1	175.2	177.7	180.2	184.6	193.2	204.7	224.0	252.0	294.3	335.7
62.5°	153.6	154.5	155.1	158.7	162.6	168.7	178.1	193.8	217.1	252.0	289.1
65°	136.5	135.0	135.8	138.4	141.5	146.5	155.3	166.8	184.2	212.7	243.4
67.5°	116.4	116.8	117.0	118.5	121.2	126.0	132.3	141.7	155.9	178.3	205.3
70°	99.2	99.4	99.6	100.9	103.2	105.9	110.3	117.6	129.8	147.1	168.3
72.5°	81.6	82.5	82.5	83.5	85.2	86.7	90.8	96.9	106.1	119.9	137.7
75°	64.0	65.5	65.9	67.2	68.7	69.1	72.2	77.0	82.9	94.2	108.2
77.5°	49.8	49.8	50.7	52.1	52.1	53.4	56.7	58.8	63.4	71.2	81.8
80°	35.2	35.8	35.8	36.2	37.0	38.1	39.6	41.4	45.4	51.1	56.7
82.5°	23.0	23.2	23.4	24.5	24.1	25.1	25.7	28.0	29.9	32.7	36.2
85°	12.1	12.1	12.3	13.0	13.6	13.8	14.2	15.3	16.7	18.0	20.1
87.5°	5.0	4.8	4.8	5.2	5.2	5.4	5.7	6.1	6.9	6.9	7.7
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: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	535.0	533.3	530.4	527.9	524.7	522.4	520.1	517.2	514.3	511.1	507.8
5°	556.3	551.3	545.7	540.0	533.3	527.9	522.0	515.3	509.7	503.4	496.7
7.5°	580.8	572.0	562.2	551.1	540.6	531.2	521.6	512.4	504.0	494.6	485.4
10°	604.5	589.2	576.9	561.8	546.9	533.1	519.9	507.8	495.6	483.9	472.6
12.5°	620.6	603.2	587.7	570.4	553.0	535.6	518.2	501.5	487.1	472.8	460.9
15°	631.7	619.5	599.0	578.1	555.3	532.7	513.0	493.5	476.4	459.8	445.6
17.5°	638.6	622.9	602.8	580.8	555.7	532.1	508.4	485.2	465.5	447.7	431.6
20°	640.5	622.1	601.1	578.3	553.2	527.2	500.7	475.3	454.0	433.7	417.4
22.5°	638.6	617.2	594.9	572.7	546.3	519.9	492.1	464.5	440.0	419.0	401.9
25°	635.5	609.7	586.3	560.1	535.6	510.5	481.8	452.5	427.0	405.2	386.0
27.5°	631.5	602.0	573.1	547.3	520.8	496.1	469.7	439.8	413.2	389.3	371.3
30°	626.9	591.7	559.7	529.1	504.0	479.3	453.6	425.3	398.5	375.7	356.2
32.5°	621.6	580.8	543.2	510.3	483.5	460.7	436.6	409.6	383.2	358.8	341.8
35°	614.3	566.0	525.4	489.8	461.9	437.2	416.1	392.5	366.3	343.5	325.9
37.5°	605.7	552.8	507.4	468.8	438.5	413.2	393.7	374.5	350.0	328.0	311.0
40°	594.2	536.9	488.3	446.7	414.2	389.3	370.3	353.7	333.4	311.2	296.0
42.5°	579.2	519.3	466.8	422.4	391.0	364.4	346.6	331.5	314.2	294.9	279.8
45°	562.0	499.2	442.7	399.1	365.0	339.7	322.3	308.7	295.5	278.4	264.4
47.5°	535.2	475.5	420.9	372.8	339.3	314.8	298.5	285.5	275.7	262.1	248.2
50°	503.4	448.8	395.2	346.8	312.9	289.3	273.8	262.5	254.1	243.6	233.2
52.5°	468.4	418.6	366.9	321.7	287.8	265.4	249.1	239.0	233.6	225.2	217.1
55°	427.6	384.7	336.6	295.3	262.1	239.2	225.2	218.1	212.0	207.8	200.5
57.5°	386.6	350.4	307.5	266.7	236.1	215.8	203.2	195.3	190.9	188.0	182.7
60°	341.8	313.3	274.0	238.6	211.4	192.1	181.1	174.6	170.6	168.9	165.4
62.5°	299.1	277.3	241.5	212.0	187.7	170.8	159.7	154.5	152.0	150.1	148.0
65°	257.0	239.9	211.6	184.0	163.5	148.2	139.4	135.2	133.3	131.2	131.0
67.5°	219.1	203.4	180.8	158.2	141.1	128.1	120.4	116.2	114.1	114.3	113.2
70°	181.9	169.7	151.3	132.9	118.3	108.0	100.7	98.0	97.1	96.9	96.1
72.5°	147.1	140.2	124.1	108.6	97.1	89.2	83.3	81.0	80.0	79.5	79.5
75°	116.6	111.6	97.7	86.0	77.2	70.7	66.8	65.1	63.6	64.5	63.8
77.5°	87.5	83.3	73.9	65.5	58.8	53.4	51.5	50.0	49.2	49.0	49.8
80°	61.5	59.0	53.2	46.5	41.4	38.3	37.0	35.8	35.2	34.7	35.2
82.5°	39.6	38.1	33.9	29.9	27.0	25.3	24.1	23.4	22.4	22.6	23.0
85°	21.6	21.1	18.4	17.2	14.4	14.2	13.4	12.8	13.0	12.6	13.2
87.5°	8.8	8.4	7.7	7.1	6.3	5.7	5.2	5.7	5.0	5.7	5.4
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: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2
2.5°	506.1	503.8	501.1	498.6	494.8	492.3	491.0	491.5	490.0	489.6	489.4
5°	492.7	487.5	482.5	478.3	473.9	468.8	465.3	464.2	463.8	462.8	460.5
7.5°	478.9	472.2	465.7	459.6	453.4	447.5	443.9	441.0	439.3	436.4	435.8
10°	464.2	456.1	449.2	440.4	432.8	426.8	422.2	419.7	418.2	415.5	413.2
12.5°	450.2	441.6	431.0	423.0	415.1	408.8	403.5	399.4	398.3	394.8	392.9
15°	435.1	424.7	415.1	405.8	398.3	390.4	387.2	383.5	379.7	376.5	375.9
17.5°	420.7	408.1	398.7	389.7	380.5	374.7	370.5	368.0	365.0	363.4	360.4
20°	403.3	393.1	382.6	374.2	366.3	361.3	355.6	353.3	351.2	347.2	346.0
22.5°	388.7	376.3	367.5	359.2	352.1	344.9	341.0	338.7	335.5	333.4	331.8
25°	373.4	363.1	352.1	343.7	337.6	330.5	327.8	324.8	322.1	320.2	318.6
27.5°	358.5	347.2	338.2	329.9	323.6	318.6	314.8	311.7	309.8	308.3	307.3
30°	343.1	332.6	324.2	316.5	309.4	305.2	301.6	300.4	298.3	297.2	295.5
32.5°	329.0	318.4	310.4	303.7	297.4	293.2	291.1	289.3	287.2	285.3	285.1
35°	313.1	303.9	296.6	289.3	284.7	281.3	279.0	277.1	275.4	274.0	273.1
37.5°	299.1	290.3	282.1	276.9	271.9	269.0	266.4	265.8	264.1	264.4	263.1
40°	284.0	276.1	269.2	263.9	260.6	257.4	255.8	253.7	252.6	252.8	251.8
42.5°	269.4	262.1	255.8	251.0	247.4	245.1	243.6	242.0	240.7	239.9	239.7
45°	254.5	248.0	242.8	238.0	235.1	233.0	231.1	229.0	227.9	227.5	227.3
47.5°	239.9	234.0	228.4	225.0	222.3	220.4	218.5	216.8	216.0	215.4	214.3
50°	224.8	218.9	215.0	210.8	208.5	206.0	203.9	203.0	202.0	201.8	202.8
52.5°	209.1	204.5	200.9	197.6	194.9	192.1	190.1	189.0	189.6	189.6	190.9
55°	194.2	189.4	186.1	183.4	180.4	177.9	175.8	175.8	175.8	177.1	178.7
57.5°	177.7	173.5	171.0	167.9	165.1	163.5	162.0	161.8	162.6	164.7	166.6
60°	161.0	158.0	155.3	152.8	150.1	148.8	148.6	148.2	149.4	151.5	155.5
62.5°	144.4	142.5	139.2	137.9	135.6	134.2	134.2	134.6	136.5	139.8	143.4
65°	128.5	125.8	123.3	122.0	120.6	119.3	119.3	121.0	123.7	126.8	131.2
67.5°	112.2	109.9	108.2	107.0	105.3	104.7	105.3	107.2	110.5	113.7	118.3
70°	94.6	94.2	92.7	91.0	90.2	90.2	90.8	92.9	95.4	100.3	104.2
72.5°	78.5	78.5	77.7	76.6	76.0	76.6	77.0	79.1	82.3	86.4	90.8
75°	63.8	63.2	62.6	62.2	62.0	62.4	63.0	64.7	68.4	72.4	76.0
77.5°	49.4	49.0	48.3	48.8	48.8	49.0	50.9	52.7	54.8	58.0	61.7
80°	35.6	35.8	35.2	35.0	36.0	36.4	37.9	39.3	40.8	44.4	47.1
82.5°	23.4	23.9	23.7	24.1	24.5	24.5	26.2	27.6	28.9	31.4	33.5
85°	13.4	13.6	13.6	14.2	14.7	14.4	15.9	16.7	17.4	19.3	20.5
87.5°	5.9	6.1	6.3	6.3	6.3	7.1	7.3	7.7	8.0	8.4	9.0
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: P243670

CATALOG NUMBER: S125DR-H375D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	516.2	516.2	516.2	516.2
2.5°	487.5	487.3	488.3	488.9
5°	459.0	458.4	457.5	458.0
7.5°	433.7	432.0	431.6	431.6
10°	411.3	409.6	409.2	408.6
12.5°	392.2	389.7	388.7	387.6
15°	374.2	373.8	371.5	369.2
17.5°	357.7	358.3	356.0	355.0
20°	343.9	342.0	341.2	340.8
22.5°	329.9	328.4	328.4	326.9
25°	317.3	316.1	316.3	314.8
27.5°	305.6	305.4	305.2	304.8
30°	294.7	293.9	293.0	293.4
32.5°	284.2	283.0	282.4	282.1
35°	273.4	272.9	272.1	271.7
37.5°	262.7	262.9	261.8	261.6
40°	251.2	251.0	250.8	250.3
42.5°	239.0	238.4	238.8	238.6
45°	226.9	226.3	226.7	226.1
47.5°	215.0	215.4	215.4	215.6
50°	203.2	204.1	204.1	204.7
52.5°	192.4	194.0	194.0	193.8
55°	180.6	182.5	183.1	183.4
57.5°	169.5	171.4	173.3	173.7
60°	157.6	161.0	162.8	163.3
62.5°	146.9	150.1	152.6	152.8
65°	135.0	138.8	141.1	141.9
67.5°	122.9	125.8	128.9	130.2
70°	109.0	112.6	114.7	115.5
72.5°	94.6	98.6	101.3	101.7
75°	80.8	83.7	85.8	86.2
77.5°	65.1	68.0	69.9	70.3
80°	49.4	51.9	53.2	54.0
82.5°	35.0	36.6	37.3	38.1
85°	21.6	22.8	23.0	23.0
87.5°	9.4	9.6	9.6	10.0
90°	0.0	0.0	0.0	0.0

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