

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: P243675

Luminaire Tested: **S125DR-H375D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243675  
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-H375D840-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1485.6 lumens  
Efficiency: N/A  
Efficacy: 132.6 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

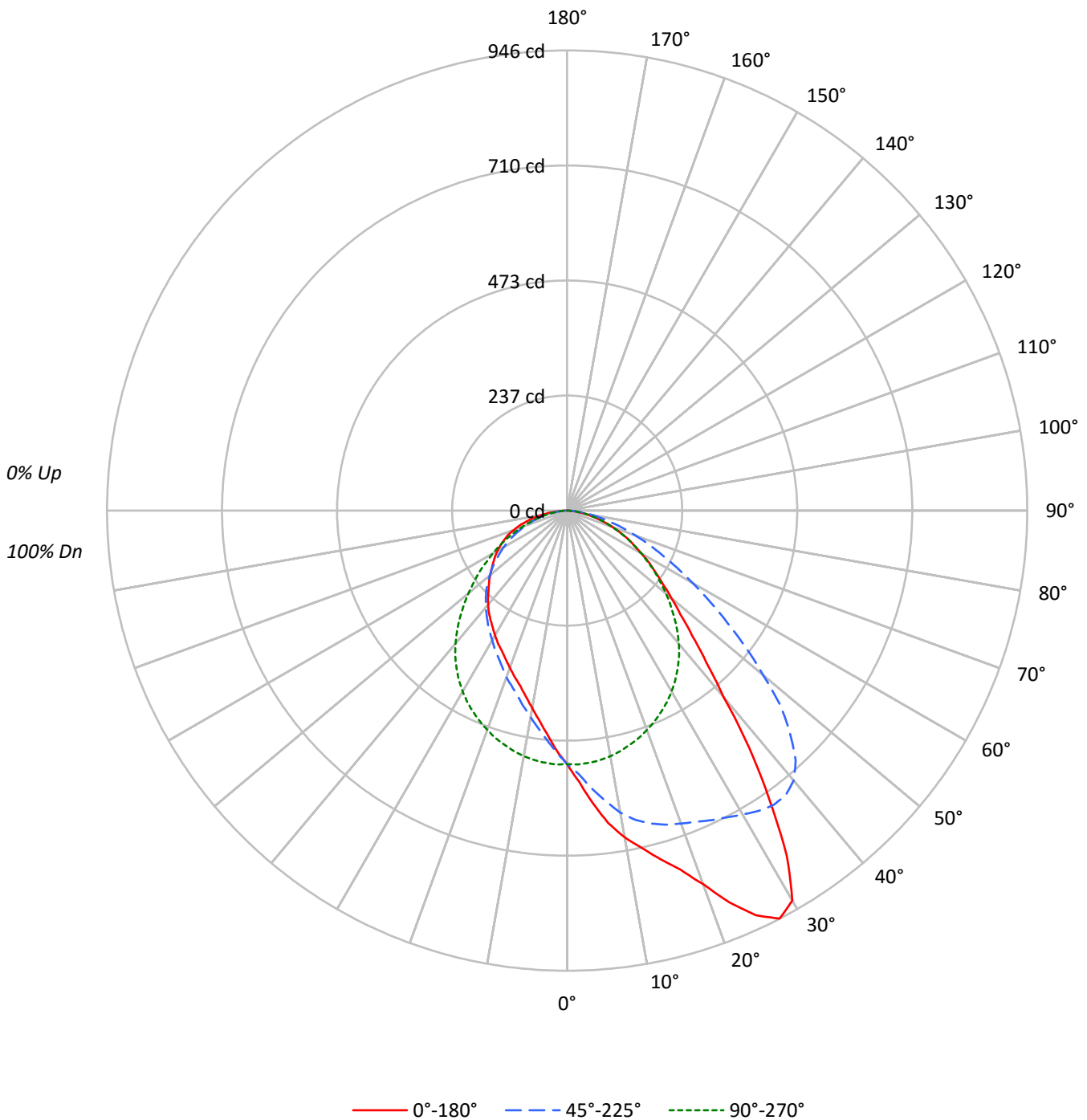
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3704	3704	3704
5°	4304	3713	3300
10°	4924	3701	2978
15°	5459	3667	2744
20°	6181	3630	2603
25°	7197	3584	2493
30°	7598	3525	2432
35°	6283	3438	2381
40°	4648	3314	2345
45°	3655	3134	2295
50°	3095	2931	2285
55°	2756	2729	2295
60°	2500	2506	2344
65°	2317	2296	2410
70°	2082	2055	2425
75°	1777	1804	2392
80°	1453	1478	2231
85°	1003	1052	1900



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.3	3.4
10°-20°	150.5	10.1
20°-30°	244.6	16.5
30°-40°	297.6	20.0
40°-50°	272.3	18.3
50°-60°	217.9	14.7
60°-70°	151.8	10.2
70°-80°	80.7	5.4
80°-90°	19.8	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°	445.4	30.0
0°-40°	743.0	50.0
0°-60°	1233.3	83.0
0°-90°	1485.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1485.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	521	521	521	521	521	
5°	603	573	520	474	462	60
15°	742	666	498	394	373	213
25°	918	702	457	334	318	419
35°	724	739	396	284	274	449
45°	364	648	312	235	228	287
55°	222	402	220	180	185	201
65°	138	215	136	120	143	136
75°	65	95	66	63	87	70
85°	12	18	13	15	23	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2
2.5°	558.0	555.7	555.1	555.3	554.0	552.9	550.4	547.0	544.7	541.7	540.9
5°	603.3	597.5	598.6	596.9	594.2	590.6	587.4	582.3	577.5	572.8	566.7
7.5°	647.6	646.6	643.6	643.2	638.8	632.6	626.3	619.3	609.0	601.8	593.5
10°	682.3	684.4	680.2	680.4	672.6	666.5	661.0	651.9	640.2	630.5	618.5
12.5°	710.2	711.1	710.4	707.7	702.6	692.2	687.0	677.4	664.8	651.4	642.1
15°	741.9	739.6	736.0	732.6	725.2	717.8	706.8	695.6	679.6	666.2	652.7
17.5°	773.6	773.2	768.8	761.6	752.3	742.5	726.1	711.7	694.6	677.0	660.1
20°	817.2	814.8	808.3	800.0	782.9	769.2	748.7	729.0	706.6	684.6	665.0
22.5°	871.7	864.1	857.5	844.9	825.2	801.3	778.3	749.7	718.5	692.7	668.1
25°	917.8	914.4	907.4	893.3	870.9	842.1	807.9	775.5	736.2	702.0	670.0
27.5°	945.7	944.2	940.0	926.7	908.1	879.5	843.0	801.7	757.1	710.8	672.6
30°	925.8	926.0	928.3	926.9	918.6	900.2	867.7	826.3	774.7	721.4	673.2
32.5°	840.4	846.1	864.3	873.0	884.6	888.4	873.8	839.4	789.5	732.0	675.3
35°	724.2	738.1	750.4	775.7	806.0	830.7	845.1	833.9	795.6	739.2	676.4
37.5°	614.7	613.6	632.6	660.1	692.2	734.3	775.1	797.5	785.0	737.7	674.5
40°	501.0	510.7	522.5	546.8	584.4	636.2	684.8	732.8	750.2	724.6	667.1
42.5°	423.2	427.6	439.4	458.5	485.5	538.4	586.3	648.1	692.5	695.4	650.8
45°	363.6	368.4	371.8	390.6	415.8	451.3	500.5	562.7	622.3	648.1	624.4
47.5°	315.8	318.5	325.9	337.3	353.8	385.3	424.6	481.1	546.0	596.1	588.0
50°	279.9	282.0	287.9	294.2	307.8	331.0	362.7	409.0	471.4	526.1	544.1
52.5°	248.2	250.9	253.9	260.0	272.5	288.1	313.9	350.0	407.9	464.0	492.5
55°	222.4	223.4	226.6	231.2	240.8	252.6	273.1	305.9	346.4	402.2	441.6
57.5°	200.0	198.9	202.3	205.5	211.8	221.7	236.5	260.8	299.5	347.1	388.1
60°	175.9	176.9	179.5	182.0	186.4	195.1	206.7	226.2	254.5	297.2	339.0
62.5°	155.1	156.0	156.6	160.2	164.2	170.4	179.9	195.7	219.2	254.5	291.9
65°	137.8	136.3	137.2	139.7	142.9	148.0	156.8	168.5	186.0	214.8	245.8
67.5°	117.5	117.9	118.2	119.6	122.4	127.2	133.6	143.1	157.5	180.1	207.4
70°	100.2	100.4	100.6	101.9	104.2	107.0	111.4	118.8	131.1	148.6	169.9
72.5°	82.4	83.3	83.3	84.3	86.0	87.5	91.7	97.9	107.2	121.1	139.1
75°	64.7	66.2	66.6	67.9	69.3	69.8	72.9	77.8	83.7	95.1	109.3
77.5°	50.3	50.3	51.2	52.6	52.6	53.9	57.3	59.4	64.0	71.9	82.6
80°	35.5	36.1	36.1	36.6	37.4	38.5	39.9	41.9	45.9	51.6	57.3
82.5°	23.3	23.5	23.7	24.7	24.3	25.4	26.0	28.3	30.2	33.0	36.6
85°	12.3	12.3	12.5	13.1	13.7	14.0	14.4	15.4	16.9	18.2	20.3
87.5°	5.1	4.9	4.9	5.3	5.3	5.5	5.7	6.1	7.0	7.0	7.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2
2.5°	540.3	538.6	535.6	533.1	529.9	527.6	525.3	522.3	519.3	516.2	512.8
5°	561.8	556.8	551.0	545.3	538.6	533.1	527.2	520.4	514.7	508.3	501.6
7.5°	586.6	577.7	567.7	556.5	546.0	536.5	526.7	517.4	509.0	499.5	490.2
10°	610.4	595.0	582.5	567.3	552.3	538.4	525.0	512.8	500.5	488.7	477.3
12.5°	626.7	609.2	593.5	576.0	558.4	540.9	523.4	506.4	491.9	477.5	465.4
15°	637.9	625.7	604.9	583.8	560.8	537.9	518.1	498.4	481.1	464.4	450.0
17.5°	644.9	629.0	608.8	586.6	561.2	537.3	513.4	490.0	470.1	452.1	435.8
20°	646.8	628.2	607.1	584.0	558.7	532.4	505.6	480.0	458.5	438.0	421.5
22.5°	644.9	623.3	600.7	578.3	551.7	525.0	496.9	469.0	444.3	423.2	405.8
25°	641.7	615.7	592.1	565.6	540.9	515.5	486.6	457.0	431.2	409.2	389.8
27.5°	637.7	607.9	578.7	552.7	525.9	501.0	474.3	444.1	417.2	393.2	375.0
30°	633.1	597.5	565.2	534.3	509.0	484.0	458.0	429.5	402.5	379.4	359.8
32.5°	627.8	586.6	548.5	515.3	488.3	465.2	440.9	413.7	387.0	362.3	345.2
35°	620.4	571.5	530.5	494.6	466.5	441.6	420.2	396.3	369.9	346.9	329.1
37.5°	611.7	558.2	512.4	473.5	442.8	417.2	397.6	378.1	353.4	331.2	314.1
40°	600.1	542.2	493.1	451.1	418.3	393.2	373.9	357.2	336.7	314.3	298.9
42.5°	584.9	524.4	471.4	426.5	394.8	368.0	350.0	334.8	317.3	297.8	282.6
45°	567.5	504.1	447.1	403.1	368.6	343.1	325.5	311.8	298.5	281.1	267.0
47.5°	540.5	480.2	425.1	376.5	342.6	317.9	301.4	288.3	278.4	264.6	250.7
50°	508.3	453.2	399.1	350.2	316.0	292.1	276.5	265.1	256.6	246.0	235.5
52.5°	473.1	422.7	370.5	324.9	290.6	268.0	251.5	241.4	235.9	227.4	219.2
55°	431.8	388.5	339.9	298.2	264.6	241.6	227.4	220.2	214.1	209.9	202.5
57.5°	390.4	353.8	310.5	269.3	238.4	217.9	205.2	197.2	192.8	189.8	184.5
60°	345.2	316.4	276.7	241.0	213.5	194.0	182.8	176.3	172.3	170.6	167.0
62.5°	302.1	280.1	243.9	214.1	189.6	172.5	161.3	156.0	153.5	151.6	149.4
65°	259.6	242.2	213.7	185.8	165.1	149.7	140.8	136.5	134.6	132.5	132.3
67.5°	221.3	205.5	182.6	159.8	142.5	129.4	121.5	117.3	115.2	115.4	114.4
70°	183.7	171.4	152.8	134.2	119.4	109.1	101.7	98.9	98.1	97.9	97.0
72.5°	148.6	141.6	125.3	109.7	98.1	90.0	84.1	81.8	80.7	80.3	80.3
75°	117.7	112.7	98.7	86.9	78.0	71.4	67.4	65.7	64.3	65.1	64.5
77.5°	88.4	84.1	74.6	66.2	59.4	53.9	52.0	50.5	49.7	49.5	50.3
80°	62.1	59.6	53.7	46.9	41.9	38.7	37.4	36.1	35.5	35.1	35.5
82.5°	39.9	38.5	34.2	30.2	27.3	25.6	24.3	23.7	22.6	22.8	23.3
85°	21.8	21.3	18.6	17.3	14.6	14.4	13.5	12.9	13.1	12.7	13.3
87.5°	8.9	8.5	7.8	7.2	6.3	5.7	5.3	5.7	5.1	5.7	5.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2	521.2
2.5°	511.1	508.8	506.0	503.5	499.7	497.1	495.9	496.3	494.8	494.4	494.2
5°	497.6	492.3	487.2	483.0	478.5	473.5	469.9	468.8	468.4	467.3	465.0
7.5°	483.6	476.9	470.3	464.2	457.8	451.9	448.3	445.4	443.7	440.7	440.1
10°	468.8	460.6	453.6	444.7	437.1	431.0	426.3	423.8	422.3	419.6	417.2
12.5°	454.7	446.0	435.2	427.2	419.2	412.8	407.5	403.3	402.2	398.6	396.7
15°	439.4	428.9	419.2	409.9	402.2	394.2	391.0	387.2	383.4	380.3	379.6
17.5°	424.9	412.2	402.7	393.6	384.3	378.4	374.1	371.6	368.6	366.9	364.0
20°	407.3	397.0	386.4	377.9	369.9	364.8	359.1	356.8	354.7	350.7	349.4
22.5°	392.5	380.0	371.2	362.7	355.5	348.3	344.3	342.0	338.8	336.7	335.0
25°	377.1	366.7	355.5	347.1	340.9	333.8	331.0	328.0	325.3	323.4	321.7
27.5°	362.1	350.7	341.6	333.1	326.8	321.7	317.9	314.7	312.8	311.4	310.3
30°	346.4	335.9	327.4	319.6	312.4	308.2	304.6	303.3	301.2	300.1	298.5
32.5°	332.3	321.5	313.5	306.7	300.4	296.1	294.0	292.1	290.0	288.1	287.9
35°	316.2	306.9	299.5	292.1	287.5	284.1	281.8	279.9	278.2	276.7	275.8
37.5°	302.1	293.2	284.9	279.6	274.6	271.6	269.1	268.4	266.8	267.0	265.7
40°	286.8	278.8	271.8	266.5	263.2	260.0	258.3	256.2	255.1	255.3	254.3
42.5°	272.0	264.6	258.3	253.4	249.8	247.5	246.0	244.3	243.1	242.2	242.0
45°	257.0	250.5	245.2	240.3	237.4	235.3	233.4	231.2	230.2	229.8	229.6
47.5°	242.2	236.3	230.6	227.2	224.5	222.6	220.7	219.0	218.1	217.5	216.4
50°	227.0	221.1	217.1	212.9	210.5	208.0	205.9	205.0	204.0	203.8	204.8
52.5°	211.2	206.5	202.9	199.5	196.8	194.0	191.9	190.9	191.5	191.5	192.8
55°	196.2	191.3	187.9	185.2	182.2	179.7	177.6	177.6	177.6	178.8	180.5
57.5°	179.5	175.2	172.7	169.5	166.8	165.1	163.6	163.4	164.2	166.3	168.3
60°	162.5	159.6	156.8	154.3	151.6	150.3	150.1	149.7	150.9	153.0	157.0
62.5°	145.8	143.9	140.6	139.3	137.0	135.5	135.5	135.9	137.8	141.2	144.8
65°	129.8	127.0	124.5	123.2	121.8	120.5	120.5	122.2	124.9	128.1	132.5
67.5°	113.3	111.0	109.3	108.0	106.3	105.7	106.3	108.2	111.6	114.8	119.4
70°	95.5	95.1	93.6	91.9	91.1	91.1	91.7	93.8	96.4	101.2	105.3
72.5°	79.3	79.3	78.4	77.4	76.7	77.4	77.8	79.9	83.1	87.3	91.7
75°	64.5	63.8	63.2	62.8	62.6	63.0	63.6	65.3	69.1	73.1	76.7
77.5°	49.9	49.5	48.8	49.2	49.2	49.5	51.4	53.3	55.4	58.6	62.4
80°	35.9	36.1	35.5	35.3	36.4	36.8	38.3	39.7	41.2	44.8	47.6
82.5°	23.7	24.1	23.9	24.3	24.7	24.7	26.4	27.9	29.2	31.7	33.8
85°	13.5	13.7	13.7	14.4	14.8	14.6	16.1	16.9	17.5	19.4	20.7
87.5°	5.9	6.1	6.3	6.3	6.3	7.2	7.4	7.8	8.0	8.5	9.1
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: P243675

CATALOG NUMBER: S125DR-H375D840-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	521.2	521.2	521.2	521.2
2.5°	492.3	492.1	493.1	493.8
5°	463.5	462.9	462.1	462.5
7.5°	438.0	436.3	435.8	435.8
10°	415.3	413.7	413.2	412.6
12.5°	396.1	393.6	392.5	391.5
15°	377.9	377.5	375.2	372.9
17.5°	361.2	361.9	359.5	358.5
20°	347.3	345.4	344.5	344.1
22.5°	333.1	331.6	331.6	330.2
25°	320.4	319.2	319.4	317.9
27.5°	308.6	308.4	308.2	307.8
30°	297.6	296.8	295.9	296.3
32.5°	287.0	285.8	285.1	284.9
35°	276.1	275.6	274.8	274.4
37.5°	265.3	265.5	264.4	264.2
40°	253.6	253.4	253.2	252.8
42.5°	241.4	240.8	241.2	241.0
45°	229.1	228.5	228.9	228.3
47.5°	217.1	217.5	217.5	217.7
50°	205.2	206.1	206.1	206.7
52.5°	194.3	195.9	195.9	195.7
55°	182.4	184.3	185.0	185.2
57.5°	171.2	173.1	175.0	175.4
60°	159.2	162.5	164.4	164.9
62.5°	148.4	151.6	154.1	154.3
65°	136.3	140.1	142.5	143.3
67.5°	124.1	127.0	130.2	131.5
70°	110.1	113.7	115.8	116.7
72.5°	95.5	99.6	102.3	102.7
75°	81.6	84.5	86.7	87.1
77.5°	65.7	68.7	70.6	71.0
80°	49.9	52.4	53.7	54.5
82.5°	35.3	37.0	37.6	38.5
85°	21.8	23.0	23.3	23.3
87.5°	9.5	9.7	9.7	10.1
90°	0.0	0.0	0.0	0.0

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