

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P832050

Luminaire Tested: S123RDIP-S340D1025U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832050  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D1025U930-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1025 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

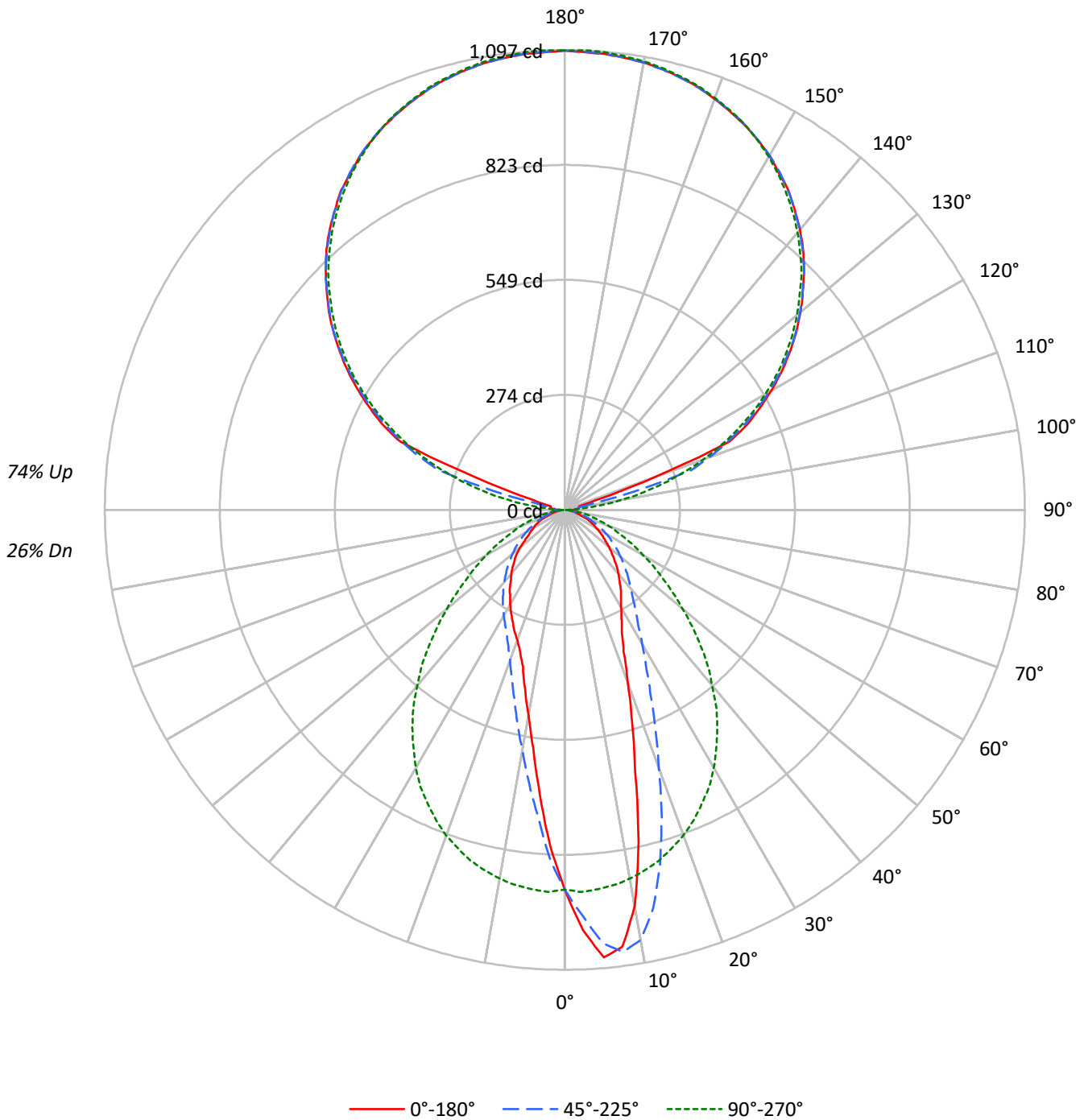
Lumens per Lamp: N/A  
Luminaire Lumens: 4542.2 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 38.3  
Input Voltage (V): 120  
Input Current (Ain): 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: 24 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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	26				
1	93	89	85	82	83	80	77	74	62	60	58	46	45	44	31	30	30	23				
2	85	78	72	68	76	70	65	61	55	52	49	41	39	37	28	27	26	20				
3	78	69	62	57	69	62	56	52	49	45	42	37	34	32	25	24	23	18				
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	66	55	47	42	58	49	43	38	39	35	31	30	27	24	21	19	18	14				
6	60	49	42	36	54	44	38	33	35	31	27	27	24	21	19	17	16	13				
7	56	44	37	32	50	40	34	29	32	28	24	25	22	19	18	16	14	11				
8	52	40	33	28	46	37	30	26	29	25	22	23	20	17	16	14	13	10				
9	48	37	30	25	43	34	27	23	27	23	19	21	18	16	15	13	12	10				
10	45	34	27	23	40	31	25	21	25	21	18	19	16	14	14	12	11	9				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	9749	9749	9749	9749	9749
5°	11577	11207	9811	7931	7363
10°	10488	11384	9762	6355	5451
15°	7221	9760	9658	5194	4313
20°	5024	7514	9465	4379	3790
25°	3828	5727	9183	3892	3493
30°	3332	4579	8830	3614	3235
35°	3059	3862	8330	3380	3001
40°	2792	3450	7676	3149	2786
45°	2521	3154	6970	2930	2573
50°	2289	2910	6137	2718	2308
55°	2070	2672	5339	2509	1980
60°	1856	2430	4637	2278	1871
65°	1712	2157	3991	2048	1768
70°	1391	1863	3484	1854	1438
75°	1219	1485	2949	1535	1268
80°	1103	1252	2417	1289	1196
85°	1013	1099	1840	1173	1099

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7354 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.6	1.8
10°-20°	191.0	4.2
20°-30°	219.2	4.8
30°-40°	216.0	4.8
40°-50°	190.5	4.2
50°-60°	146.6	3.2
60°-70°	96.4	2.1
70°-80°	46.8	1.0
80°-90°	14.0	0.3
90°-100°	38.6	0.8
100°-110°	186.7	4.1
110°-120°	457.6	10.1
120°-130°	581.0	12.8
130°-140°	620.6	13.7
140°-150°	580.4	12.8
150°-160°	468.1	10.3
160°-170°	302.1	6.7
170°-180°	104.1	2.3
0°-30°	492.8	10.8
0°-40°	708.8	15.6
0°-60°	1045.9	23.0
0°-90°	1203.1	26.5
90°-120°	682.9	15.0
90°-150°	2464.8	54.3
90°-180°	3339.0	73.5
0°-180°	4542.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	906	906	906	906	906	
5°	1071	1037	908	734	681	98
15°	648	876	867	466	387	183
25°	322	482	773	328	294	152
35°	233	294	634	257	228	145
45°	166	207	458	192	169	129
55°	110	142	284	134	106	99
65°	67	85	157	80	69	66
75°	29	36	71	37	30	32
85°	8	9	15	10	9	9
90°	24	20	1	20	24	11
95°	31	25	50	25	31	26
105°	36	178	242	178	36	75
115°	478	467	455	467	478	450
125°	654	651	641	651	654	585
135°	806	806	798	806	806	622
145°	930	928	921	928	930	581
155°	1013	1014	1015	1014	1013	467
165°	1068	1067	1070	1067	1068	302
175°	1091	1092	1095	1092	1091	104
180°	1095	1095	1095	1095	1095	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	1003.8	1000.6	997.5	996.5	995.6	992.6	989.7	983.0	976.3	969.4	962.6
5°	1071.4	1071.7	1072.1	1071.2	1070.2	1066.3	1062.4	1054.3	1046.1	1037.2	1028.3
7.5°	1050.6	1056.5	1062.4	1063.6	1064.7	1067.6	1070.6	1068.8	1066.9	1063.6	1060.2
10°	959.6	959.2	958.8	965.5	972.2	992.1	1011.9	1022.2	1032.4	1041.5	1050.6
12.5°	811.0	811.6	812.2	834.1	856.0	874.7	893.5	919.5	945.5	973.5	1001.5
15°	648.0	657.1	666.2	685.7	705.2	733.4	761.7	796.6	831.5	875.8	920.2
17.5°	532.2	536.1	540.0	558.7	577.5	604.2	630.9	670.5	710.0	767.2	824.4
20°	438.6	442.1	445.6	459.2	472.7	498.4	524.0	561.7	599.4	656.0	712.6
22.5°	366.2	373.0	379.9	389.0	398.1	416.7	435.2	473.7	512.1	563.7	615.3
25°	322.3	325.5	328.7	336.4	344.2	362.1	379.9	405.3	430.8	482.2	533.6
27.5°	292.6	293.6	294.5	300.2	306.0	317.5	329.0	352.6	376.2	418.5	460.9
30°	268.1	269.8	271.5	275.9	280.4	288.7	297.1	313.8	330.5	368.4	406.3
32.5°	249.2	250.1	251.0	254.8	258.5	264.6	270.7	283.9	297.1	326.1	355.0
35°	232.8	233.0	233.2	236.0	238.8	244.7	250.7	261.6	272.6	293.9	315.3
37.5°	214.3	215.6	216.9	218.9	221.0	226.2	231.4	240.3	249.2	266.8	284.5
40°	198.7	199.8	200.9	203.3	205.7	209.8	213.9	222.1	230.2	245.5	260.7
42.5°	183.1	183.8	184.6	187.0	189.4	194.4	199.4	205.9	212.4	225.0	237.7
45°	165.6	167.5	169.3	171.9	174.5	178.8	183.1	189.8	196.4	207.2	218.0
47.5°	151.1	152.1	153.0	155.2	157.5	162.7	167.9	173.8	179.7	189.8	199.8
50°	136.7	137.0	137.4	139.4	141.5	146.1	150.8	157.6	164.5	173.8	183.1
52.5°	122.9	123.8	124.8	126.8	128.9	132.0	135.2	142.2	149.3	158.4	167.5
55°	110.3	110.8	111.4	112.9	114.4	118.1	121.8	127.9	134.1	142.4	150.8
57.5°	98.4	99.2	99.9	101.0	102.1	105.5	108.8	114.2	119.6	127.9	136.3
60°	86.2	87.1	88.0	89.3	90.6	93.2	95.8	100.6	105.5	112.9	120.3
62.5°	77.2	77.4	77.6	78.7	79.8	81.7	83.6	87.5	91.4	98.8	106.2
65°	67.2	67.8	68.3	68.9	69.4	70.9	72.4	75.8	79.1	84.7	90.2
67.5°	56.8	57.4	57.9	58.9	59.8	61.1	62.4	64.6	66.8	72.0	77.2
70°	44.2	44.2	44.2	45.7	47.2	49.4	51.6	53.3	55.0	59.2	63.5
72.5°	36.0	36.2	36.4	36.6	36.8	38.1	39.4	42.1	44.9	47.5	50.1
75°	29.3	29.5	29.7	29.9	30.1	30.5	30.8	31.8	32.7	35.7	38.6
77.5°	23.4	23.6	23.8	24.0	24.1	24.5	24.9	25.3	25.6	26.7	27.9
80°	17.8	18.0	18.2	18.4	18.6	18.8	18.9	19.3	19.7	20.2	20.8
82.5°	13.0	13.0	13.0	13.0	13.0	13.4	13.7	13.7	13.7	14.1	14.5
85°	8.2	8.2	8.2	8.4	8.5	8.5	8.5	8.7	8.9	8.9	8.9
87.5°	3.7	3.5	3.3	3.5	3.7	3.7	3.7	3.9	4.1	4.1	4.1
90°	24.4	24.1	23.7	23.3	23.0	22.4	21.7	21.0	20.3	19.5	17.2
92.5°	27.7	27.5	27.3	27.1	26.9	26.2	25.0	23.7	22.4	21.2	19.5
95°	30.9	30.9	30.9	30.9	30.9	30.3	29.0	27.8	26.5	25.2	23.2
97.5°	33.4	33.2	33.0	32.8	32.6	31.8	30.4	28.9	27.5	26.0	35.3
100°	34.2	34.0	33.8	33.6	33.5	32.6	31.2	29.7	28.3	26.9	55.1
102.5°	35.0	34.6	34.3	33.9	33.5	36.3	42.3	48.3	54.3	60.2	91.7
105°	35.8	35.4	35.1	34.7	34.4	50.2	82.2	114.2	146.2	178.2	194.5
107.5°	84.6	108.3	132.0	155.7	179.4	205.2	233.0	260.9	288.7	316.6	313.9
110°	223.8	249.7	275.5	301.4	327.2	343.1	349.1	355.1	361.1	367.0	365.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	424.0	424.3	424.7	425.1	425.4	424.8	423.2	421.5	419.9	418.3	416.3
115°	478.5	477.8	477.1	476.3	475.6	474.3	472.5	470.7	468.9	467.1	465.5
117.5°	522.5	522.3	522.1	521.9	521.7	520.9	519.5	518.0	516.6	515.1	514.2
120°	568.0	568.0	568.0	568.0	568.0	567.3	565.9	564.4	563.0	561.5	561.0
122.5°	612.8	612.6	612.4	612.2	612.1	611.5	610.6	609.7	608.8	607.9	607.2
125°	654.3	653.9	653.6	653.2	652.8	652.5	652.1	651.8	651.4	651.0	650.3
127.5°	695.0	695.3	695.7	696.1	696.4	696.3	695.8	695.2	694.7	694.2	693.3
130°	734.0	734.4	734.8	735.1	735.5	735.3	734.6	733.9	733.1	732.4	731.7
132.5°	769.8	770.4	770.9	771.5	772.0	771.9	771.2	770.5	769.8	769.0	768.5
135°	806.5	807.0	807.5	808.1	808.6	808.6	808.1	807.5	807.0	806.5	805.7
137.5°	841.5	841.8	842.2	842.5	842.9	842.6	841.7	840.8	839.9	839.0	838.7
140°	872.4	872.7	873.1	873.5	873.8	873.6	872.9	872.2	871.5	870.8	870.2
142.5°	900.9	901.4	901.9	902.5	903.0	903.0	902.5	901.9	901.4	900.9	900.3
145°	930.2	930.2	930.2	930.2	930.2	930.0	929.6	929.3	928.9	928.5	928.2
147.5°	951.3	952.2	953.1	954.0	954.9	955.2	954.8	954.5	954.1	953.8	953.4
150°	975.7	976.3	976.8	977.4	977.9	978.0	977.6	977.3	976.9	976.5	976.2
152.5°	995.3	996.2	997.1	998.0	998.9	999.0	998.2	997.5	996.8	996.1	995.9
155°	1013.2	1014.3	1015.3	1016.4	1017.5	1017.6	1016.7	1015.8	1014.9	1014.0	1013.8
157.5°	1028.6	1030.1	1031.5	1033.0	1034.4	1034.6	1033.5	1032.4	1031.3	1030.3	1030.4
160°	1043.3	1044.5	1045.8	1047.1	1048.3	1048.4	1047.3	1046.3	1045.2	1044.1	1044.3
162.5°	1057.1	1058.2	1059.3	1060.4	1061.4	1061.4	1060.1	1058.8	1057.6	1056.3	1056.5
165°	1067.7	1069.0	1070.2	1071.5	1072.8	1072.7	1071.2	1069.8	1068.3	1066.9	1067.1
167.5°	1075.8	1077.3	1078.7	1080.2	1081.6	1081.6	1080.2	1078.7	1077.3	1075.8	1075.8
170°	1083.2	1084.6	1086.0	1087.5	1088.9	1088.9	1087.5	1086.0	1084.6	1083.2	1083.2
172.5°	1087.2	1088.8	1090.5	1092.1	1093.7	1093.8	1092.4	1090.9	1089.5	1088.0	1087.9
175°	1091.3	1092.7	1094.2	1095.6	1097.1	1097.2	1095.9	1094.6	1093.4	1092.1	1091.9
177.5°	1092.1	1093.9	1095.7	1097.5	1099.3	1099.5	1098.1	1096.6	1095.2	1093.7	1093.5
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	961.6	960.7	951.8	942.9	934.1	925.4	918.9	912.4	901.5	890.5	883.6
5°	1021.2	1014.2	1000.1	986.0	964.8	943.6	925.8	908.0	885.3	862.7	843.7
7.5°	1054.5	1048.7	1031.6	1014.5	986.5	958.5	930.6	902.8	869.3	835.9	807.3
10°	1055.4	1060.2	1046.1	1032.0	1000.4	968.9	931.0	893.1	848.2	803.2	766.3
12.5°	1022.3	1043.1	1040.2	1037.2	1005.1	973.0	926.9	880.9	825.7	770.6	724.3
15°	960.5	1000.8	1012.7	1024.6	998.0	971.5	919.1	866.7	801.9	737.1	684.0
17.5°	880.9	937.3	968.7	1000.1	980.8	961.4	904.1	846.7	773.7	700.7	643.0
20°	786.5	860.4	909.6	958.8	951.8	944.7	885.5	826.3	747.5	668.8	606.2
22.5°	693.3	771.3	839.3	907.2	914.5	921.7	861.9	802.1	716.0	629.8	566.1
25°	612.9	692.2	773.2	854.1	870.5	886.8	830.0	773.2	683.9	594.5	531.2
27.5°	536.2	611.6	700.7	789.9	819.6	849.3	797.3	745.3	652.3	559.3	496.1
30°	473.7	541.1	632.0	723.0	764.4	805.8	758.1	710.4	618.1	525.8	464.0
32.5°	415.4	475.7	567.1	658.4	706.5	754.6	713.4	672.2	583.4	494.6	433.6
35°	369.3	423.3	508.6	593.8	647.6	701.5	667.7	633.9	547.2	460.5	402.7
37.5°	329.8	375.1	455.1	535.1	592.3	649.5	621.3	593.1	511.5	430.0	375.4
40°	297.1	333.5	407.9	482.4	538.5	594.5	570.4	546.3	473.3	400.3	349.3
42.5°	269.0	300.4	367.3	434.1	485.5	537.0	521.0	505.0	438.9	372.8	325.5
45°	244.4	270.7	329.6	388.4	435.8	483.1	470.5	457.9	400.9	343.9	300.4
47.5°	222.4	245.1	297.6	350.2	392.7	435.2	423.5	411.8	364.7	317.5	278.0
50°	202.4	221.7	265.5	309.3	347.6	385.8	376.2	366.5	327.5	288.5	254.4
52.5°	183.4	199.4	238.8	278.1	309.0	339.8	332.4	324.9	294.9	264.8	233.8
55°	165.4	180.1	213.3	246.6	272.9	299.3	291.9	284.5	261.1	237.7	210.4
57.5°	149.1	161.9	188.8	215.8	236.7	257.7	254.2	250.7	231.2	211.7	189.2
60°	131.8	143.3	166.6	189.8	206.7	223.6	219.5	215.4	201.5	187.5	168.2
62.5°	116.4	126.6	145.2	163.8	177.5	191.2	188.3	185.3	174.7	164.1	148.2
65°	100.3	110.3	125.3	140.4	151.1	161.9	159.3	156.7	148.7	140.7	127.9
67.5°	85.6	94.0	107.0	119.9	127.2	134.4	132.9	131.5	125.3	119.2	109.2
70°	70.7	78.0	88.8	99.5	104.5	109.6	110.1	110.7	105.1	99.5	92.1
72.5°	55.9	61.6	71.7	81.7	85.6	89.5	89.3	89.1	85.8	82.4	75.8
75°	42.9	47.2	55.0	62.8	66.1	69.4	70.2	70.9	67.8	64.6	60.9
77.5°	30.8	33.8	39.7	45.7	49.4	53.1	53.5	53.8	52.4	50.9	47.3
80°	21.7	22.7	26.4	30.1	34.0	37.9	38.4	39.0	37.5	36.0	33.8
82.5°	15.0	15.6	16.9	18.2	21.4	24.5	25.3	26.0	25.3	24.5	22.1
85°	9.1	9.3	9.8	10.4	11.9	13.4	14.1	14.9	14.5	14.1	12.8
87.5°	4.1	4.1	4.3	4.5	4.8	5.2	6.1	7.1	6.5	5.9	5.4
90°	14.8	12.5	10.1	8.0	6.2	4.4	2.6	0.8	2.6	4.4	6.2
92.5°	17.9	16.3	14.6	14.4	15.5	16.5	17.6	18.7	17.6	16.5	15.5
95°	21.2	19.3	17.3	20.0	27.4	34.8	42.2	49.6	42.2	34.8	27.4
97.5°	44.5	53.7	62.9	70.1	75.1	80.2	85.3	90.3	85.3	80.2	75.1
100°	83.3	111.5	139.7	152.0	148.4	144.8	141.1	137.5	141.1	144.8	148.4
102.5°	123.2	154.6	186.1	200.6	198.3	195.9	193.6	191.2	193.6	195.9	198.3
105°	210.8	227.0	243.3	250.5	248.5	246.5	244.5	242.5	244.5	246.5	248.5
107.5°	311.1	308.4	305.7	303.5	301.9	300.3	298.7	297.0	298.7	300.3	301.9
110°	363.0	361.1	359.1	357.3	355.9	354.4	353.0	351.6	353.0	354.4	355.9





TEST NUMBER: P832050

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	414.3	412.3	410.3	408.7	407.4	406.2	404.9	403.6	404.9	406.2	407.4
115°	463.9	462.2	460.6	459.2	458.2	457.1	456.0	454.9	456.0	457.1	458.2
117.5°	513.3	512.4	511.5	510.4	509.2	507.9	506.6	505.4	506.6	507.9	509.2
120°	560.4	559.9	559.3	558.3	556.6	555.0	553.4	551.7	553.4	555.0	556.6
122.5°	606.5	605.7	605.0	604.0	602.7	601.5	600.2	598.9	600.2	601.5	602.7
125°	649.6	648.9	648.1	647.1	645.6	644.2	642.7	641.3	642.7	644.2	645.6
127.5°	692.4	691.4	690.5	689.4	687.9	686.5	685.0	683.6	685.0	686.5	687.9
130°	731.0	730.2	729.5	728.4	727.0	725.5	724.1	722.6	724.1	725.5	727.0
132.5°	767.9	767.4	766.9	765.9	764.4	763.0	761.5	760.1	761.5	763.0	764.4
135°	805.0	804.3	803.6	802.7	801.6	800.5	799.4	798.3	799.4	800.5	801.6
137.5°	838.3	837.9	837.6	836.7	835.2	833.8	832.3	830.9	832.3	833.8	835.2
140°	869.7	869.1	868.6	867.8	866.7	865.6	864.5	863.4	864.5	865.6	866.7
142.5°	899.8	899.2	898.7	897.9	896.8	895.7	894.6	893.5	894.6	895.7	896.8
145°	927.8	927.4	927.1	926.3	925.0	923.7	922.5	921.2	922.5	923.7	925.0
147.5°	953.0	952.7	952.3	951.7	950.8	949.9	949.0	948.1	949.0	949.9	950.8
150°	975.8	975.5	975.1	974.6	974.1	973.6	973.0	972.5	973.0	973.6	974.1
152.5°	995.7	995.5	995.4	995.2	995.0	994.8	994.6	994.4	994.6	994.8	995.0
155°	1013.6	1013.4	1013.3	1013.3	1013.7	1014.1	1014.4	1014.8	1014.4	1014.1	1013.7
157.5°	1030.6	1030.8	1031.0	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1
160°	1044.5	1044.6	1044.8	1045.0	1045.2	1045.4	1045.5	1045.7	1045.5	1045.4	1045.2
162.5°	1056.7	1056.8	1057.0	1057.4	1057.9	1058.5	1059.0	1059.6	1059.0	1058.5	1057.9
165°	1067.2	1067.4	1067.6	1068.0	1068.5	1069.0	1069.6	1070.1	1069.6	1069.0	1068.5
167.5°	1075.8	1075.8	1075.8	1076.2	1076.9	1077.6	1078.4	1079.1	1078.4	1077.6	1076.9
170°	1083.2	1083.2	1083.2	1083.5	1084.2	1085.0	1085.7	1086.4	1085.7	1085.0	1084.2
172.5°	1087.7	1087.5	1087.3	1087.7	1088.6	1089.5	1090.4	1091.3	1090.4	1089.5	1088.6
175°	1091.7	1091.6	1091.4	1091.7	1092.6	1093.5	1094.5	1095.4	1094.5	1093.5	1092.6
177.5°	1093.4	1093.2	1093.0	1093.4	1094.3	1095.2	1096.1	1097.0	1096.1	1095.2	1094.3
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	876.8	866.2	855.6	848.0	840.4	830.9	821.4	821.1	820.7	813.6	806.6
5°	824.8	806.4	788.0	770.0	752.0	734.0	716.0	711.9	707.8	701.7	695.6
7.5°	778.7	749.4	720.1	697.0	674.0	656.0	638.0	625.7	613.5	604.0	594.5
10°	729.3	693.0	656.6	628.7	600.9	581.4	561.9	547.8	533.6	527.0	520.3
12.5°	678.1	638.5	599.0	571.7	544.4	521.0	497.6	484.8	472.0	462.7	453.4
15°	630.9	588.4	545.9	516.9	488.0	466.1	444.1	431.3	418.5	409.2	400.0
17.5°	585.3	542.4	499.5	470.1	440.8	420.9	401.1	388.6	376.2	370.4	364.7
20°	543.7	500.4	457.1	429.5	401.8	382.3	362.8	356.1	349.4	344.1	338.7
22.5°	502.4	460.9	419.3	392.7	366.2	352.0	337.9	332.5	327.2	323.1	319.0
25°	467.9	426.5	385.1	361.9	338.7	327.7	316.8	313.2	309.7	305.6	301.5
27.5°	433.0	393.6	354.3	335.7	317.1	308.2	299.3	294.9	290.4	287.1	283.7
30°	402.2	365.8	329.4	314.0	298.6	290.8	283.0	278.1	273.3	270.2	267.0
32.5°	372.5	340.2	307.9	294.7	281.5	273.9	266.3	261.6	257.0	253.3	249.6
35°	345.0	317.0	288.9	276.8	264.8	257.2	249.6	244.9	240.3	236.6	232.8
37.5°	320.9	295.4	270.0	258.6	247.3	240.6	234.0	229.1	224.3	220.4	216.5
40°	298.2	275.7	253.3	242.3	231.4	224.1	216.9	212.6	208.3	204.8	201.3
42.5°	278.1	257.5	236.9	226.2	215.4	208.5	201.6	196.6	191.6	189.6	187.5
45°	257.0	238.8	220.6	210.2	199.8	192.5	185.3	181.0	176.8	174.9	173.1
47.5°	238.4	221.5	204.6	194.4	184.2	177.7	171.2	167.9	164.5	161.9	159.3
50°	220.2	203.9	187.5	177.7	167.9	162.3	156.7	152.6	148.5	146.7	144.8
52.5°	202.8	187.9	173.1	163.0	153.0	147.6	142.2	138.7	135.2	131.3	127.4
55°	183.1	170.1	157.1	148.2	139.3	133.7	128.1	124.0	119.9	115.9	111.8
57.5°	166.7	153.9	141.1	133.1	125.1	119.8	114.4	109.9	105.5	102.1	98.8
60°	148.9	137.8	126.6	118.8	111.0	105.8	100.6	96.4	92.1	90.4	88.8
62.5°	132.2	121.8	111.4	104.5	97.7	92.7	87.6	84.9	82.1	81.0	79.8
65°	115.1	106.2	97.3	91.0	84.7	80.4	76.1	74.8	73.5	72.6	71.7
67.5°	99.2	91.5	83.9	78.4	72.8	69.8	66.8	65.4	63.9	62.8	61.6
70°	84.7	78.0	71.3	66.5	61.6	58.9	56.1	54.8	53.5	51.4	49.4
72.5°	69.1	63.9	58.7	55.0	51.2	48.8	46.4	43.8	41.2	39.4	37.5
75°	57.2	52.0	46.8	43.3	39.7	36.9	34.2	33.2	32.3	31.8	31.2
77.5°	43.8	39.4	34.9	32.1	29.3	28.0	26.7	26.2	25.6	25.4	25.3
80°	31.6	27.9	24.1	22.7	21.2	20.8	20.4	20.1	19.7	19.5	19.3
82.5°	19.7	17.8	16.0	15.6	15.2	15.0	14.9	14.7	14.5	14.3	14.1
85°	11.5	10.8	10.0	9.8	9.7	9.5	9.3	9.3	9.3	9.3	9.3
87.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.5
90°	8.0	10.1	12.5	14.8	17.2	19.5	20.3	21.0	21.7	22.4	23.0
92.5°	14.4	14.6	16.3	17.9	19.5	21.2	22.4	23.7	25.0	26.2	26.9
95°	20.0	17.3	19.3	21.2	23.2	25.2	26.5	27.8	29.0	30.3	30.9
97.5°	70.1	62.9	53.7	44.5	35.3	26.0	27.5	28.9	30.4	31.8	32.6
100°	152.0	139.7	111.5	83.3	55.1	26.9	28.3	29.7	31.2	32.6	33.5
102.5°	200.6	186.1	154.6	123.2	91.7	60.2	54.3	48.3	42.3	36.3	33.5
105°	250.5	243.3	227.0	210.8	194.5	178.2	146.2	114.2	82.2	50.2	34.4
107.5°	303.5	305.7	308.4	311.1	313.9	316.6	288.7	260.9	233.0	205.2	179.4
110°	357.3	359.1	361.1	363.0	365.0	367.0	361.1	355.1	349.1	343.1	327.2



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	408.7	410.3	412.3	414.3	416.3	418.3	419.9	421.5	423.2	424.8	425.4
115°	459.2	460.6	462.2	463.9	465.5	467.1	468.9	470.7	472.5	474.3	475.6
117.5°	510.4	511.5	512.4	513.3	514.2	515.1	516.6	518.0	519.5	520.9	521.7
120°	558.3	559.3	559.9	560.4	561.0	561.5	563.0	564.4	565.9	567.3	568.0
122.5°	604.0	605.0	605.7	606.5	607.2	607.9	608.8	609.7	610.6	611.5	612.1
125°	647.1	648.1	648.9	649.6	650.3	651.0	651.4	651.8	652.1	652.5	652.8
127.5°	689.4	690.5	691.4	692.4	693.3	694.2	694.7	695.2	695.8	696.3	696.4
130°	728.4	729.5	730.2	731.0	731.7	732.4	733.1	733.9	734.6	735.3	735.5
132.5°	765.9	766.9	767.4	767.9	768.5	769.0	769.8	770.5	771.2	771.9	772.0
135°	802.7	803.6	804.3	805.0	805.7	806.5	807.0	807.5	808.1	808.6	808.6
137.5°	836.7	837.6	837.9	838.3	838.7	839.0	839.9	840.8	841.7	842.6	842.9
140°	867.8	868.6	869.1	869.7	870.2	870.8	871.5	872.2	872.9	873.6	873.8
142.5°	897.9	898.7	899.2	899.8	900.3	900.9	901.4	901.9	902.5	903.0	903.0
145°	926.3	927.1	927.4	927.8	928.2	928.5	928.9	929.3	929.6	930.0	930.2
147.5°	951.7	952.3	952.7	953.0	953.4	953.8	954.1	954.5	954.8	955.2	954.9
150°	974.6	975.1	975.5	975.8	976.2	976.5	976.9	977.3	977.6	978.0	977.9
152.5°	995.2	995.4	995.5	995.7	995.9	996.1	996.8	997.5	998.2	999.0	998.9
155°	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9	1015.8	1016.7	1017.6	1017.5
157.5°	1031.1	1031.0	1030.8	1030.6	1030.4	1030.3	1031.3	1032.4	1033.5	1034.6	1034.4
160°	1045.0	1044.8	1044.6	1044.5	1044.3	1044.1	1045.2	1046.3	1047.3	1048.4	1048.3
162.5°	1057.4	1057.0	1056.8	1056.7	1056.5	1056.3	1057.6	1058.8	1060.1	1061.4	1061.4
165°	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3	1069.8	1071.2	1072.7	1072.8
167.5°	1076.2	1075.8	1075.8	1075.8	1075.8	1075.8	1077.3	1078.7	1080.2	1081.6	1081.6
170°	1083.5	1083.2	1083.2	1083.2	1083.2	1083.2	1084.6	1086.0	1087.5	1088.9	1088.9
172.5°	1087.7	1087.3	1087.5	1087.7	1087.9	1088.0	1089.5	1090.9	1092.4	1093.8	1093.7
175°	1091.7	1091.4	1091.6	1091.7	1091.9	1092.1	1093.4	1094.6	1095.9	1097.2	1097.1
177.5°	1093.4	1093.0	1093.2	1093.4	1093.5	1093.7	1095.2	1096.6	1098.1	1099.5	1099.3
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



TEST NUMBER: P832050

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	905.7	905.7	905.7	905.7
2.5°	804.7	802.9	802.1	801.4
5°	689.8	684.0	682.7	681.4
7.5°	592.1	589.7	581.7	573.7
10°	512.8	505.4	502.1	498.7
12.5°	446.6	439.7	438.6	437.5
15°	395.1	390.3	388.6	387.0
17.5°	361.3	358.0	355.9	353.9
20°	336.3	333.8	332.4	330.9
22.5°	317.1	315.3	314.2	313.1
25°	298.8	296.0	295.0	294.1
27.5°	281.3	278.9	278.0	277.0
30°	265.0	262.9	261.6	260.3
32.5°	247.1	244.7	244.0	243.2
35°	231.4	229.9	229.1	228.4
37.5°	214.6	212.8	211.7	210.6
40°	200.3	199.4	198.9	198.3
42.5°	185.9	184.2	184.0	183.8
45°	171.4	169.7	169.3	169.0
47.5°	157.8	156.3	156.2	156.0
50°	142.8	140.7	139.3	137.8
52.5°	125.5	123.7	122.4	121.1
55°	109.7	107.7	106.6	105.5
57.5°	97.9	96.9	96.4	95.8
60°	88.2	87.6	87.3	86.9
62.5°	79.3	78.7	78.7	78.7
65°	71.1	70.6	70.0	69.4
67.5°	60.5	59.4	59.2	59.0
70°	47.7	46.0	45.9	45.7
72.5°	37.3	37.1	36.8	36.4
75°	30.8	30.5	30.5	30.5
77.5°	24.9	24.5	24.5	24.5
80°	19.1	18.9	19.1	19.3
82.5°	14.1	14.1	13.9	13.7
85°	9.1	8.9	8.9	8.9
87.5°	4.5	4.5	4.5	4.5
90°	23.3	23.7	24.1	24.4
92.5°	27.1	27.3	27.5	27.7
95°	30.9	30.9	30.9	30.9
97.5°	32.8	33.0	33.2	33.4
100°	33.6	33.8	34.0	34.2
102.5°	33.9	34.3	34.6	35.0
105°	34.7	35.1	35.4	35.8
107.5°	155.7	132.0	108.3	84.6
110°	301.4	275.5	249.7	223.8



TEST NUMBER: P832050

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	425.1	424.7	424.3	424.0
115°	476.3	477.1	477.8	478.5
117.5°	521.9	522.1	522.3	522.5
120°	568.0	568.0	568.0	568.0
122.5°	612.2	612.4	612.6	612.8
125°	653.2	653.6	653.9	654.3
127.5°	696.1	695.7	695.3	695.0
130°	735.1	734.8	734.4	734.0
132.5°	771.5	770.9	770.4	769.8
135°	808.1	807.5	807.0	806.5
137.5°	842.5	842.2	841.8	841.5
140°	873.5	873.1	872.7	872.4
142.5°	902.5	901.9	901.4	900.9
145°	930.2	930.2	930.2	930.2
147.5°	954.0	953.1	952.2	951.3
150°	977.4	976.8	976.3	975.7
152.5°	998.0	997.1	996.2	995.3
155°	1016.4	1015.3	1014.3	1013.2
157.5°	1033.0	1031.5	1030.1	1028.6
160°	1047.1	1045.8	1044.5	1043.3
162.5°	1060.4	1059.3	1058.2	1057.1
165°	1071.5	1070.2	1069.0	1067.7
167.5°	1080.2	1078.7	1077.3	1075.8
170°	1087.5	1086.0	1084.6	1083.2
172.5°	1092.1	1090.5	1088.8	1087.2
175°	1095.6	1094.2	1092.7	1091.3
177.5°	1097.5	1095.7	1093.9	1092.1
180°	1095.4	1095.4	1095.4	1095.4



TEST NUMBER: P832050

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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	5.90	6.56	7.05	7.69	9.26	10.57	11.23	11.71	12.35	13.93
	3H	7.11	7.70	8.26	8.84	10.43	12.05	12.64	13.20	13.78	15.37
	4H	7.49	8.04	8.65	9.18	10.78	12.53	13.09	13.69	14.23	15.83
	6H	7.76	8.27	8.92	9.41	11.02	12.84	13.35	14.01	14.49	16.10
	8H	7.84	8.33	9.01	9.48	11.08	12.91	13.40	14.08	14.55	16.15
	12H	7.89	8.35	9.06	9.50	11.12	12.94	13.40	14.11	14.55	16.17
4H	2H	6.61	7.16	7.77	8.30	9.90	10.54	11.10	11.71	12.24	13.83
	3H	7.96	8.42	9.13	9.59	11.19	12.18	12.65	13.36	13.81	15.42
	4H	8.41	8.84	9.58	9.99	11.61	12.78	13.21	13.96	14.36	15.99
	6H	8.77	9.13	9.95	10.31	11.92	13.21	13.58	14.39	14.75	16.37
	8H	8.89	9.23	10.07	10.40	12.03	13.34	13.68	14.52	14.85	16.48
	12H	8.96	9.27	10.15	10.44	12.08	13.40	13.71	14.59	14.88	16.52
8H	4H	8.71	9.05	9.89	10.22	11.85	12.74	13.08	13.92	14.25	15.88
	6H	9.17	9.45	10.36	10.66	12.29	13.23	13.51	14.43	14.72	16.35
	8H	9.36	9.61	10.56	10.79	12.44	13.42	13.66	14.62	14.85	16.49
	12H	9.50	9.71	10.70	10.89	12.58	13.53	13.74	14.73	14.92	16.60
12H	4H	8.71	9.02	9.91	10.20	11.84	12.68	12.99	13.87	14.17	15.80
	6H	9.23	9.47	10.43	10.66	12.31	13.21	13.45	14.41	14.63	16.28
	8H	9.44	9.65	10.64	10.83	12.52	13.39	13.61	14.59	14.79	16.47