

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: P832075

Luminaire Tested: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

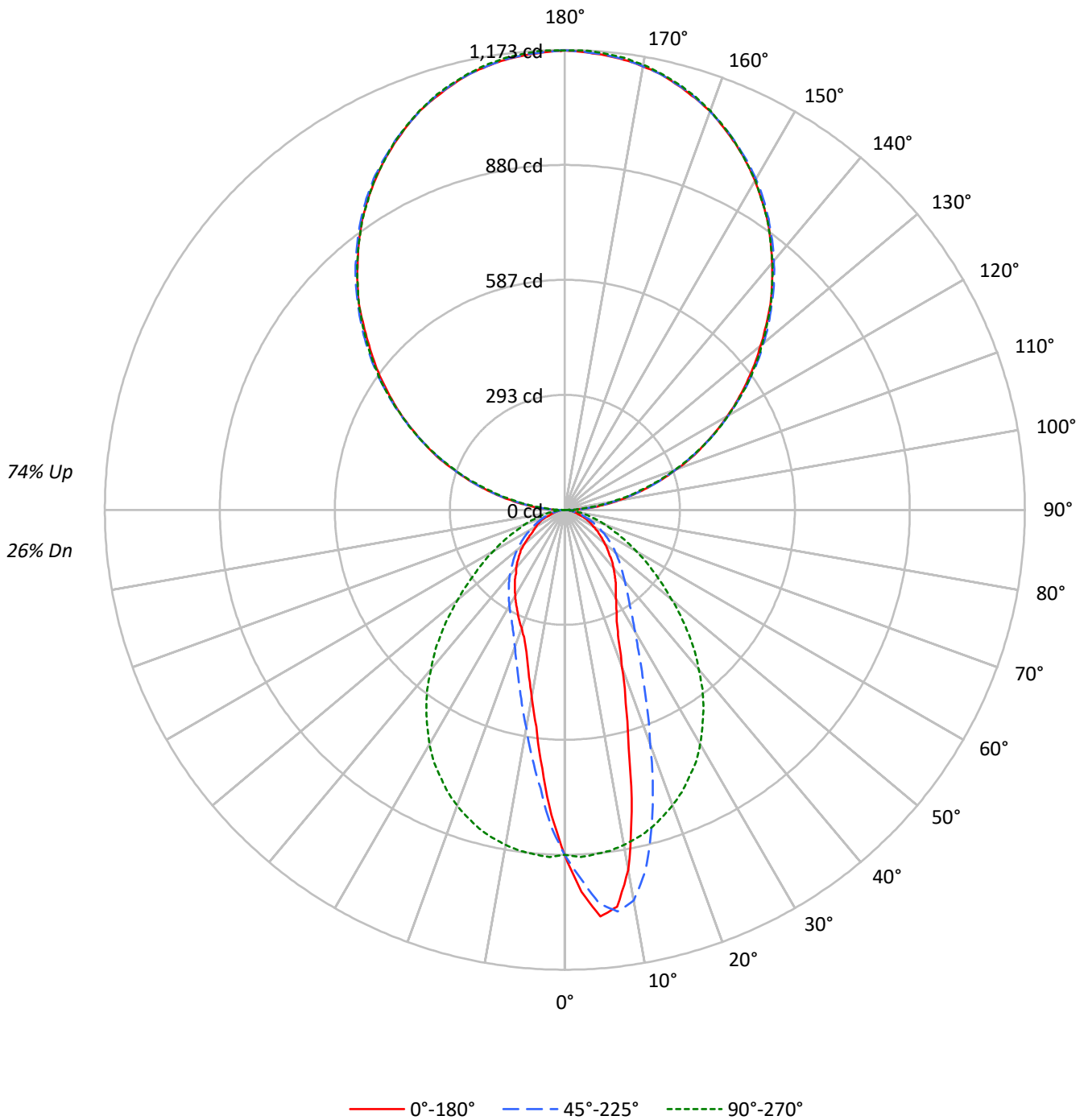
Test Method: LM-79-2019  
Report Number: P832075  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D1195U927-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4415.8 lumens  
Efficiency: N/A  
Efficacy: 101.7 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): 43.4  
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

TEST NUMBER: P832075  
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### Luminous Intensity Polar Plot





TEST NUMBER: P832075

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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	36	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°	9473	9473	9473	9473	9473
5°	11248	10889	9532	7706	7154
10°	10191	11060	9485	6174	5297
15°	7016	9483	9385	5046	4190
20°	4881	7301	9196	4255	3683
25°	3720	5564	8922	3782	3394
30°	3238	4448	8580	3511	3143
35°	2972	3753	8093	3284	2916
40°	2712	3351	7458	3060	2708
45°	2449	3064	6772	2848	2500
50°	2224	2828	5963	2641	2242
55°	2012	2597	5187	2438	1924
60°	1802	2362	4506	2213	1817
65°	1663	2096	3879	1989	1719
70°	1350	1813	3383	1800	1397
75°	1185	1439	2865	1493	1231
80°	1072	1221	2349	1252	1165
85°	976	1074	1778	1136	1074

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7145 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	1.8
10°-20°	185.6	4.2
20°-30°	213.0	4.8
30°-40°	209.9	4.8
40°-50°	185.1	4.2
50°-60°	142.4	3.2
60°-70°	93.6	2.1
70°-80°	45.5	1.0
80°-90°	13.9	0.3
90°-100°	75.4	1.7
100°-110°	228.3	5.2
110°-120°	388.6	8.8
120°-130°	511.3	11.6
130°-140°	574.7	13.0
140°-150°	565.0	12.8
150°-160°	475.7	10.8
160°-170°	316.7	7.2
170°-180°	110.9	2.5
0°-30°	478.8	10.8
0°-40°	688.7	15.6
0°-60°	1016.3	23.0
0°-90°	1169.3	26.5
90°-120°	692.4	15.7
90°-150°	2343.3	53.1
90°-180°	3247.0	73.5
0°-180°	4415.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	880	880	880	880	880	
5°	1041	1008	882	713	662	95
15°	630	851	842	453	376	178
25°	313	468	751	318	286	148
35°	226	286	616	250	222	141
45°	161	201	445	187	164	125
55°	107	138	276	130	102	96
65°	65	82	152	78	68	64
75°	28	35	69	36	30	31
85°	8	9	14	9	9	8
90°	28	22	1	22	28	13
95°	72	68	54	68	72	72
105°	219	217	207	217	219	232
115°	392	392	391	392	392	388
125°	566	573	572	573	566	506
135°	742	747	743	747	742	571
145°	901	906	901	906	901	563
155°	1030	1033	1032	1033	1030	475
165°	1120	1121	1124	1121	1120	316
175°	1164	1165	1169	1165	1164	111
180°	1172	1172	1172	1172	1172	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1
2.5°	975.3	972.2	969.2	968.3	967.4	964.5	961.6	955.1	948.6	941.9	935.3
5°	1041.0	1041.3	1041.7	1040.8	1039.9	1036.1	1032.3	1024.4	1016.4	1007.8	999.1
7.5°	1020.8	1026.6	1032.3	1033.4	1034.5	1037.4	1040.3	1038.5	1036.7	1033.4	1030.2
10°	932.4	932.0	931.7	938.1	944.6	963.9	983.3	993.2	1003.1	1011.9	1020.8
12.5°	788.0	788.6	789.1	810.4	831.7	849.9	868.1	893.4	918.7	945.9	973.1
15°	629.6	638.5	647.3	666.3	685.2	712.6	740.1	774.0	807.9	851.0	894.1
17.5°	517.1	520.9	524.6	542.9	561.1	587.1	613.0	651.5	689.9	745.5	801.0
20°	426.1	429.6	433.0	446.2	459.3	484.2	509.1	545.8	582.4	637.4	692.4
22.5°	355.8	362.5	369.1	378.0	386.8	404.8	422.9	460.2	497.6	547.7	597.9
25°	313.2	316.3	319.3	326.9	334.5	351.8	369.1	393.8	418.6	468.5	518.5
27.5°	284.3	285.2	286.1	291.7	297.3	308.5	319.7	342.6	365.5	406.7	447.8
30°	260.5	262.1	263.8	268.1	272.4	280.5	288.7	304.9	321.1	357.9	394.7
32.5°	242.1	243.0	243.9	247.5	251.1	257.1	263.0	275.9	288.7	316.8	345.0
35°	226.2	226.4	226.6	229.3	232.0	237.8	243.6	254.2	264.8	285.6	306.3
37.5°	208.2	209.5	210.7	212.7	214.7	219.7	224.8	233.5	242.1	259.3	276.4
40°	193.0	194.1	195.2	197.6	199.9	203.9	207.8	215.8	223.7	238.5	253.3
42.5°	177.9	178.6	179.3	181.7	184.0	188.9	193.8	200.1	206.4	218.7	230.9
45°	160.9	162.7	164.5	167.1	169.6	173.7	177.9	184.4	190.9	201.3	211.8
47.5°	146.9	147.8	148.7	150.8	153.0	158.0	163.1	168.9	174.6	184.4	194.1
50°	132.8	133.1	133.5	135.5	137.5	142.0	146.5	153.2	159.8	168.9	177.9
52.5°	119.4	120.3	121.2	123.2	125.2	128.3	131.3	138.2	145.1	153.9	162.7
55°	107.2	107.7	108.2	109.7	111.1	114.7	118.4	124.3	130.3	138.4	146.5
57.5°	95.6	96.3	97.1	98.1	99.2	102.5	105.7	111.0	116.2	124.3	132.4
60°	83.7	84.6	85.5	86.8	88.0	90.6	93.1	97.8	102.5	109.7	116.9
62.5°	75.1	75.2	75.4	76.5	77.6	79.4	81.2	85.0	88.8	96.0	103.2
65°	65.3	65.9	66.4	66.9	67.5	68.9	70.4	73.6	76.9	82.3	87.7
67.5°	55.2	55.7	56.3	57.2	58.1	59.4	60.6	62.8	64.9	70.0	75.1
70°	42.9	42.9	42.9	44.4	45.8	48.0	50.2	51.8	53.4	57.6	61.7
72.5°	35.0	35.2	35.4	35.5	35.7	37.0	38.2	41.0	43.7	46.2	48.7
75°	28.5	28.7	28.9	29.0	29.2	29.6	29.9	30.9	31.8	34.6	37.5
77.5°	22.7	22.9	23.1	23.3	23.5	23.8	24.2	24.5	24.9	26.0	27.1
80°	17.3	17.5	17.7	17.9	18.0	18.2	18.4	18.8	19.1	19.7	20.2
82.5°	12.6	12.6	12.6	12.6	12.6	13.0	13.4	13.4	13.4	13.7	14.1
85°	7.9	7.9	7.9	8.1	8.3	8.3	8.3	8.5	8.7	8.7	8.7
87.5°	3.6	3.4	3.2	3.4	3.6	3.6	3.6	3.8	4.0	4.0	4.0
90°	27.6	27.2	26.8	26.4	26.0	25.4	24.5	23.7	22.9	22.1	19.4
92.5°	39.6	40.0	40.4	40.8	41.2	41.1	40.5	39.9	39.3	38.7	37.4
95°	71.8	71.8	71.8	71.8	71.8	71.4	70.6	69.7	68.9	68.1	66.5
97.5°	103.1	103.3	103.5	103.7	103.9	103.5	102.5	101.5	100.4	99.4	98.2
100°	139.9	139.5	139.1	138.7	138.3	137.8	137.1	136.5	135.9	135.3	134.3
102.5°	177.6	177.8	178.1	178.3	178.5	178.3	177.6	177.0	176.4	175.8	174.4
105°	219.1	218.7	218.2	217.8	217.4	217.2	217.2	217.2	217.2	217.2	215.4
107.5°	261.4	261.6	261.8	262.0	262.2	262.0	261.4	260.8	260.2	259.6	258.7
110°	304.7	305.1	305.5	305.9	306.3	306.1	305.3	304.5	303.6	302.8	302.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	350.7	350.7	350.7	350.7	350.7	350.2	349.1	348.1	347.1	346.1	346.1
115°	392.1	392.3	392.5	392.7	392.9	392.9	392.7	392.5	392.3	392.1	392.5
117.5°	434.4	435.1	435.7	436.3	436.9	437.2	437.2	437.2	437.2	437.2	437.6
120°	479.5	479.9	480.4	480.8	481.2	481.5	481.7	481.9	482.1	482.3	483.3
122.5°	522.8	523.4	524.0	524.6	525.3	525.9	526.5	527.1	527.7	528.3	528.7
125°	566.1	566.9	567.7	568.5	569.3	570.1	571.0	571.8	572.6	573.4	573.8
127.5°	609.3	610.1	611.0	611.8	612.6	613.6	614.8	616.1	617.3	618.5	618.9
130°	651.7	653.1	654.5	656.0	657.4	658.5	659.3	660.1	661.0	661.8	662.4
132.5°	695.8	696.9	697.9	698.9	699.9	701.0	702.0	703.0	704.0	705.0	705.5
135°	741.9	742.3	742.7	743.1	743.5	744.1	744.9	745.7	746.6	747.4	747.6
137.5°	782.4	783.0	783.6	784.2	784.8	785.6	786.7	787.7	788.7	789.7	789.1
140°	821.9	823.4	824.8	826.2	827.7	828.5	828.7	828.9	829.1	829.3	829.1
142.5°	862.4	863.5	864.5	865.5	866.5	867.1	867.3	867.5	867.8	868.0	867.5
145°	901.1	901.9	902.7	903.5	904.4	904.9	905.1	905.3	905.5	905.7	905.1
147.5°	936.1	937.3	938.5	939.7	941.0	941.6	941.6	941.6	941.6	941.6	941.0
150°	969.2	970.4	971.7	972.9	974.1	974.7	974.7	974.7	974.7	974.7	974.3
152.5°	1001.4	1002.4	1003.5	1004.5	1005.5	1005.8	1005.4	1005.0	1004.6	1004.2	1004.0
155°	1030.0	1031.4	1032.8	1034.2	1035.7	1036.0	1035.2	1034.3	1033.5	1032.7	1032.5
157.5°	1056.6	1057.9	1059.1	1060.3	1061.6	1061.8	1060.9	1060.1	1059.3	1058.5	1058.3
160°	1082.4	1083.2	1084.1	1084.9	1085.7	1085.6	1084.6	1083.5	1082.5	1081.5	1081.5
162.5°	1101.7	1103.2	1104.6	1106.0	1107.5	1107.7	1106.7	1105.6	1104.6	1103.6	1103.4
165°	1120.2	1121.6	1123.0	1124.4	1125.9	1126.0	1124.8	1123.5	1122.3	1121.1	1121.1
167.5°	1136.7	1137.9	1139.2	1140.4	1141.6	1141.6	1140.4	1139.2	1137.9	1136.7	1136.5
170°	1148.7	1150.1	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7	1148.7
172.5°	1157.9	1159.3	1160.8	1162.2	1163.6	1163.7	1162.5	1161.3	1160.0	1158.8	1158.8
175°	1164.3	1165.8	1167.2	1168.6	1170.1	1170.2	1168.9	1167.7	1166.5	1165.3	1165.3
177.5°	1168.0	1169.4	1170.9	1172.3	1173.7	1173.8	1172.6	1171.4	1170.2	1168.9	1168.9
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1
2.5°	934.4	933.5	924.8	916.1	907.7	899.2	892.9	886.6	875.9	865.3	858.6
5°	992.3	985.4	971.7	958.0	937.4	916.9	899.5	882.2	860.2	838.2	819.8
7.5°	1024.6	1019.0	1002.4	985.8	958.5	931.3	904.2	877.2	844.7	812.2	784.4
10°	1025.5	1030.2	1016.4	1002.7	972.1	941.4	904.6	867.8	824.1	780.5	744.6
12.5°	993.4	1013.6	1010.7	1007.8	976.6	945.4	900.6	855.9	802.3	748.7	703.8
15°	933.3	972.4	984.0	995.5	969.7	943.9	893.0	842.2	779.2	716.2	664.6
17.5°	855.9	910.7	941.2	971.7	952.9	934.2	878.4	822.7	751.8	680.9	624.8
20°	764.2	836.0	883.8	931.7	924.8	917.9	860.4	802.8	726.3	649.8	589.0
22.5°	673.7	749.4	815.5	881.5	888.5	895.6	837.5	779.4	695.7	612.0	550.1
25°	595.5	672.6	751.2	829.9	845.8	861.7	806.4	751.2	664.5	577.7	516.2
27.5°	521.0	594.3	680.9	767.5	796.3	825.2	774.7	724.2	633.8	543.4	482.1
30°	460.2	525.7	614.1	702.5	742.8	783.0	736.6	690.3	600.6	510.9	450.9
32.5°	403.6	462.2	551.0	639.7	686.5	733.2	693.1	653.1	566.9	480.6	421.3
35°	358.8	411.3	494.2	577.0	629.3	681.6	648.8	615.9	531.7	447.4	391.3
37.5°	320.4	364.4	442.2	520.0	575.5	631.1	603.7	576.2	497.0	417.8	364.8
40°	288.7	324.0	396.4	468.7	523.2	577.7	554.2	530.8	459.9	389.0	339.4
42.5°	261.4	291.9	356.9	421.8	471.8	521.8	506.2	490.7	426.5	362.3	316.3
45°	237.4	263.0	320.2	377.4	423.4	469.4	457.2	444.9	389.5	334.1	291.9
47.5°	216.1	238.1	289.2	340.3	381.6	422.9	411.5	400.2	354.3	308.5	270.1
50°	196.7	215.4	258.0	300.6	337.7	374.9	365.5	356.1	318.2	280.4	247.2
52.5°	178.2	193.8	232.0	270.3	300.2	330.2	322.9	315.7	286.5	257.3	227.1
55°	160.7	175.0	207.3	239.6	265.2	290.8	283.6	276.4	253.7	230.9	204.4
57.5°	144.9	157.3	183.5	209.6	230.0	250.4	247.0	243.6	224.6	205.7	183.8
60°	128.1	139.3	161.8	184.4	200.8	217.2	213.2	209.3	195.7	182.2	163.5
62.5°	113.1	123.0	141.1	159.1	172.5	185.8	182.9	180.1	169.8	159.5	144.0
65°	97.4	107.2	121.8	136.4	146.9	157.3	154.8	152.3	144.5	136.8	124.3
67.5°	83.2	91.3	103.9	116.5	123.6	130.6	129.2	127.7	121.8	115.8	106.1
70°	68.7	75.8	86.2	96.7	101.6	106.4	107.0	107.5	102.1	96.7	89.5
72.5°	54.3	59.9	69.6	79.4	83.2	87.0	86.8	86.6	83.4	80.1	73.6
75°	41.7	45.8	53.4	61.0	64.2	67.5	68.2	68.9	65.9	62.8	59.2
77.5°	29.9	32.8	38.6	44.4	48.0	51.6	52.0	52.3	50.9	49.4	46.0
80°	21.1	22.0	25.6	29.2	33.0	36.8	37.3	37.9	36.4	35.0	32.8
82.5°	14.6	15.2	16.4	17.7	20.7	23.8	24.5	25.3	24.5	23.8	21.5
85°	8.8	9.0	9.6	10.1	11.5	13.0	13.7	14.4	14.1	13.7	12.4
87.5°	4.0	4.0	4.1	4.3	4.7	5.1	6.0	6.9	6.3	5.8	5.2
90°	16.8	14.1	11.5	9.1	7.1	5.0	3.0	0.9	3.0	5.0	7.1
92.5°	36.2	35.0	33.7	32.5	31.3	30.1	28.8	27.6	28.8	30.1	31.3
95°	64.8	63.2	61.6	60.0	58.6	57.2	55.7	54.3	55.7	57.2	58.6
97.5°	97.0	95.7	94.5	93.4	92.3	91.3	90.3	89.3	90.3	91.3	92.3
100°	133.3	132.2	131.2	130.1	128.9	127.6	126.4	125.2	126.4	127.6	128.9
102.5°	172.9	171.5	170.1	169.1	168.4	167.8	167.2	166.6	167.2	167.8	168.4
105°	213.5	211.7	209.9	208.7	208.3	207.9	207.5	207.1	207.5	207.9	208.3
107.5°	257.9	257.1	256.3	255.8	255.6	255.4	255.2	255.0	255.2	255.4	255.6
110°	302.0	301.6	301.2	300.8	300.4	300.0	299.5	299.1	299.5	300.0	300.4





TEST NUMBER: P832075

CATALOG NUMBER: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	346.1	346.1	346.1	346.0	345.8	345.6	345.4	345.2	345.4	345.6	345.8
115°	392.9	393.3	393.7	393.6	393.0	392.4	391.8	391.2	391.8	392.4	393.0
117.5°	438.0	438.4	438.8	438.9	438.7	438.5	438.3	438.1	438.3	438.5	438.7
120°	484.3	485.4	486.4	486.3	485.1	483.8	482.6	481.4	482.6	483.8	485.1
122.5°	529.1	529.5	530.0	529.8	528.9	528.1	527.3	526.5	527.3	528.1	528.9
125°	574.2	574.6	575.1	575.0	574.3	573.7	573.1	572.5	573.1	573.7	574.3
127.5°	619.3	619.7	620.2	619.7	618.5	617.3	616.1	614.8	616.1	617.3	618.5
130°	663.0	663.6	664.2	663.7	662.1	660.5	658.8	657.2	658.8	660.5	662.1
132.5°	705.9	706.3	706.7	706.1	704.4	702.8	701.2	699.5	701.2	702.8	704.4
135°	747.8	748.0	748.2	747.7	746.5	745.2	744.0	742.8	744.0	745.2	746.5
137.5°	788.5	787.9	787.3	786.4	785.4	784.4	783.4	782.4	783.4	784.4	785.4
140°	828.9	828.7	828.5	827.9	826.8	825.8	824.8	823.8	824.8	825.8	826.8
142.5°	867.1	866.7	866.3	865.6	864.6	863.6	862.5	861.5	862.5	863.6	864.6
145°	904.5	903.9	903.2	902.7	902.3	901.9	901.5	901.1	901.5	901.9	902.3
147.5°	940.4	939.7	939.1	938.4	937.6	936.8	936.0	935.1	936.0	936.8	937.6
150°	973.9	973.5	973.1	972.7	972.3	971.9	971.5	971.0	971.5	971.9	972.3
152.5°	1003.8	1003.6	1003.4	1003.0	1002.3	1001.7	1001.1	1000.5	1001.1	1001.7	1002.3
155°	1032.3	1032.1	1031.9	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8
157.5°	1058.1	1057.9	1057.7	1057.7	1057.9	1058.1	1058.3	1058.5	1058.3	1058.1	1057.9
160°	1081.5	1081.5	1081.5	1081.7	1082.1	1082.5	1082.9	1083.3	1082.9	1082.5	1082.1
162.5°	1103.2	1103.0	1102.8	1103.0	1103.6	1104.2	1104.8	1105.4	1104.8	1104.2	1103.6
165°	1121.1	1121.1	1121.1	1121.4	1122.0	1122.6	1123.2	1123.8	1123.2	1122.6	1122.0
167.5°	1136.3	1136.1	1135.9	1136.2	1137.0	1137.8	1138.7	1139.5	1138.7	1137.8	1137.0
170°	1148.7	1148.7	1148.7	1149.1	1149.9	1150.7	1151.5	1152.4	1151.5	1150.7	1149.9
172.5°	1158.8	1158.8	1158.8	1159.2	1160.0	1160.9	1161.7	1162.5	1161.7	1160.9	1160.0
175°	1165.3	1165.3	1165.3	1165.7	1166.5	1167.3	1168.1	1168.9	1168.1	1167.3	1166.5
177.5°	1168.9	1168.9	1168.9	1169.3	1170.2	1171.0	1171.8	1172.6	1171.8	1171.0	1170.2
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



TEST NUMBER: P832075

CATALOG NUMBER: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1	880.1
2.5°	851.9	841.6	831.3	823.9	816.6	807.3	798.1	797.8	797.4	790.6	783.7
5°	801.4	783.5	765.7	748.2	730.7	713.2	695.7	691.7	687.7	681.8	675.8
7.5°	756.7	728.1	699.6	677.3	654.9	637.4	619.9	608.0	596.1	586.9	577.7
10°	708.7	673.3	637.9	610.9	583.8	564.9	545.9	532.2	518.5	512.0	505.5
12.5°	658.9	620.4	582.0	555.5	529.0	506.2	483.5	471.1	458.6	449.6	440.6
15°	613.0	571.7	530.4	502.3	474.1	452.8	431.5	419.1	406.7	397.6	388.6
17.5°	568.7	527.0	485.3	456.8	428.3	409.0	389.7	377.6	365.5	359.9	354.3
20°	528.3	486.2	444.2	417.3	390.4	371.5	352.5	346.0	339.5	334.3	329.1
22.5°	488.2	447.8	407.4	381.6	355.8	342.1	328.4	323.1	317.9	313.9	310.0
25°	454.6	414.4	374.2	351.6	329.1	318.4	307.8	304.4	300.9	297.0	293.0
27.5°	420.7	382.5	344.2	326.2	308.1	299.5	290.8	286.5	282.2	278.9	275.7
30°	390.8	355.4	320.1	305.1	290.1	282.5	274.9	270.3	265.6	262.5	259.4
32.5°	361.9	330.5	299.1	286.3	273.5	266.1	258.7	254.2	249.7	246.1	242.5
35°	335.2	308.0	280.7	269.0	257.3	249.9	242.5	238.0	233.5	229.8	226.2
37.5°	311.8	287.0	262.3	251.3	240.3	233.8	227.3	222.6	217.9	214.2	210.4
40°	289.7	267.9	246.1	235.4	224.8	217.8	210.7	206.6	202.4	199.0	195.6
42.5°	270.3	250.2	230.2	219.7	209.3	202.6	195.9	191.1	186.2	184.2	182.2
45°	249.7	232.0	214.3	204.2	194.1	187.1	180.1	175.9	171.8	169.9	168.1
47.5°	231.7	215.2	198.8	188.9	179.0	172.7	166.3	163.1	159.8	157.3	154.8
50°	214.0	198.1	182.2	172.7	163.1	157.7	152.3	148.3	144.3	142.5	140.7
52.5°	197.0	182.6	168.1	158.4	148.7	143.4	138.2	134.8	131.3	127.6	123.8
55°	177.9	165.3	152.6	144.0	135.3	129.9	124.5	120.5	116.5	112.6	108.6
57.5°	162.0	149.6	137.1	129.4	121.6	116.4	111.1	106.8	102.5	99.2	96.0
60°	144.7	133.9	123.0	115.5	107.9	102.8	97.8	93.6	89.5	87.9	86.2
62.5°	128.5	118.4	108.2	101.6	94.9	90.0	85.2	82.4	79.7	78.7	77.6
65°	111.9	103.2	94.5	88.4	82.3	78.1	74.0	72.7	71.4	70.5	69.6
67.5°	96.3	88.9	81.5	76.1	70.7	67.8	64.9	63.5	62.1	61.0	59.9
70°	82.3	75.8	69.3	64.6	59.9	57.2	54.5	53.2	52.0	50.0	48.0
72.5°	67.1	62.1	57.0	53.4	49.8	47.4	45.1	42.6	40.1	38.2	36.4
75°	55.6	50.5	45.5	42.0	38.6	35.9	33.2	32.3	31.4	30.9	30.3
77.5°	42.6	38.2	33.9	31.2	28.5	27.2	26.0	25.4	24.9	24.7	24.5
80°	30.7	27.1	23.5	22.0	20.6	20.2	19.8	19.5	19.1	18.9	18.8
82.5°	19.1	17.3	15.5	15.2	14.8	14.6	14.4	14.3	14.1	13.9	13.7
85°	11.2	10.5	9.7	9.6	9.4	9.2	9.0	9.0	9.0	9.0	9.0
87.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.5	4.3
90°	9.1	11.5	14.1	16.8	19.4	22.1	22.9	23.7	24.5	25.4	26.0
92.5°	32.5	33.7	35.0	36.2	37.4	38.7	39.3	39.9	40.5	41.1	41.2
95°	60.0	61.6	63.2	64.8	66.5	68.1	68.9	69.7	70.6	71.4	71.8
97.5°	93.4	94.5	95.7	97.0	98.2	99.4	100.4	101.5	102.5	103.5	103.9
100°	130.1	131.2	132.2	133.3	134.3	135.3	135.9	136.5	137.1	137.8	138.3
102.5°	169.1	170.1	171.5	172.9	174.4	175.8	176.4	177.0	177.6	178.3	178.5
105°	208.7	209.9	211.7	213.5	215.4	217.2	217.2	217.2	217.2	217.2	217.4
107.5°	255.8	256.3	257.1	257.9	258.7	259.6	260.2	260.8	261.4	262.0	262.2
110°	300.8	301.2	301.6	302.0	302.4	302.8	303.6	304.5	305.3	306.1	306.3



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	346.0	346.1	346.1	346.1	346.1	346.1	347.1	348.1	349.1	350.2	350.7
115°	393.6	393.7	393.3	392.9	392.5	392.1	392.3	392.5	392.7	392.9	392.9
117.5°	438.9	438.8	438.4	438.0	437.6	437.2	437.2	437.2	437.2	437.2	436.9
120°	486.3	486.4	485.4	484.3	483.3	482.3	482.1	481.9	481.7	481.5	481.2
122.5°	529.8	530.0	529.5	529.1	528.7	528.3	527.7	527.1	526.5	525.9	525.3
125°	575.0	575.1	574.6	574.2	573.8	573.4	572.6	571.8	571.0	570.1	569.3
127.5°	619.7	620.2	619.7	619.3	618.9	618.5	617.3	616.1	614.8	613.6	612.6
130°	663.7	664.2	663.6	663.0	662.4	661.8	661.0	660.1	659.3	658.5	657.4
132.5°	706.1	706.7	706.3	705.9	705.5	705.0	704.0	703.0	702.0	701.0	699.9
135°	747.7	748.2	748.0	747.8	747.6	747.4	746.6	745.7	744.9	744.1	743.5
137.5°	786.4	787.3	787.9	788.5	789.1	789.7	788.7	787.7	786.7	785.6	784.8
140°	827.9	828.5	828.7	828.9	829.1	829.3	829.1	828.9	828.7	828.5	827.7
142.5°	865.6	866.3	866.7	867.1	867.5	868.0	867.8	867.5	867.3	867.1	866.5
145°	902.7	903.2	903.9	904.5	905.1	905.7	905.5	905.3	905.1	904.9	904.4
147.5°	938.4	939.1	939.7	940.4	941.0	941.6	941.6	941.6	941.6	941.6	941.0
150°	972.7	973.1	973.5	973.9	974.3	974.7	974.7	974.7	974.7	974.7	974.1
152.5°	1003.0	1003.4	1003.6	1003.8	1004.0	1004.2	1004.6	1005.0	1005.4	1005.8	1005.5
155°	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.5	1034.3	1035.2	1036.0	1035.7
157.5°	1057.7	1057.7	1057.9	1058.1	1058.3	1058.5	1059.3	1060.1	1060.9	1061.8	1061.6
160°	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5	1083.5	1084.6	1085.6	1085.7
162.5°	1103.0	1102.8	1103.0	1103.2	1103.4	1103.6	1104.6	1105.6	1106.7	1107.7	1107.5
165°	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3	1123.5	1124.8	1126.0	1125.9
167.5°	1136.2	1135.9	1136.1	1136.3	1136.5	1136.7	1137.9	1139.2	1140.4	1141.6	1141.6
170°	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1	1151.5	1153.0	1154.4	1154.4
172.5°	1159.2	1158.8	1158.8	1158.8	1158.8	1158.8	1160.0	1161.3	1162.5	1163.7	1163.6
175°	1165.7	1165.3	1165.3	1165.3	1165.3	1165.3	1166.5	1167.7	1168.9	1170.2	1170.1
177.5°	1169.3	1168.9	1168.9	1168.9	1168.9	1168.9	1170.2	1171.4	1172.6	1173.8	1173.7
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7

TEST NUMBER: P832075

CATALOG NUMBER: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	880.1	880.1	880.1	880.1
2.5°	781.9	780.1	779.4	778.7
5°	670.2	664.6	663.4	662.1
7.5°	575.3	573.0	565.2	557.5
10°	498.3	491.1	487.8	484.6
12.5°	433.9	427.2	426.1	425.1
15°	383.9	379.2	377.6	376.0
17.5°	351.1	347.8	345.9	343.9
20°	326.7	324.4	322.9	321.5
22.5°	308.1	306.3	305.3	304.2
25°	290.3	287.6	286.7	285.8
27.5°	273.3	271.0	270.1	269.2
30°	257.4	255.5	254.2	252.9
32.5°	240.1	237.8	237.1	236.3
35°	224.8	223.4	222.6	221.9
37.5°	208.6	206.8	205.7	204.6
40°	194.7	193.8	193.2	192.7
42.5°	180.6	179.0	178.8	178.6
45°	166.5	164.9	164.5	164.2
47.5°	153.4	151.9	151.7	151.5
50°	138.7	136.8	135.3	133.9
52.5°	122.0	120.2	118.9	117.6
55°	106.6	104.6	103.6	102.5
57.5°	95.1	94.2	93.6	93.1
60°	85.7	85.2	84.8	84.4
62.5°	77.0	76.5	76.5	76.5
65°	69.1	68.6	68.0	67.5
67.5°	58.8	57.7	57.6	57.4
70°	46.4	44.7	44.6	44.4
72.5°	36.3	36.1	35.7	35.4
75°	29.9	29.6	29.6	29.6
77.5°	24.2	23.8	23.8	23.8
80°	18.6	18.4	18.6	18.8
82.5°	13.7	13.7	13.5	13.4
85°	8.8	8.7	8.7	8.7
87.5°	4.3	4.3	4.3	4.3
90°	26.4	26.8	27.2	27.6
92.5°	40.8	40.4	40.0	39.6
95°	71.8	71.8	71.8	71.8
97.5°	103.7	103.5	103.3	103.1
100°	138.7	139.1	139.5	139.9
102.5°	178.3	178.1	177.8	177.6
105°	217.8	218.2	218.7	219.1
107.5°	262.0	261.8	261.6	261.4
110°	305.9	305.5	305.1	304.7



TEST NUMBER: P832075

CATALOG NUMBER: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	350.7	350.7	350.7	350.7
115°	392.7	392.5	392.3	392.1
117.5°	436.3	435.7	435.1	434.4
120°	480.8	480.4	479.9	479.5
122.5°	524.6	524.0	523.4	522.8
125°	568.5	567.7	566.9	566.1
127.5°	611.8	611.0	610.1	609.3
130°	656.0	654.5	653.1	651.7
132.5°	698.9	697.9	696.9	695.8
135°	743.1	742.7	742.3	741.9
137.5°	784.2	783.6	783.0	782.4
140°	826.2	824.8	823.4	821.9
142.5°	865.5	864.5	863.5	862.4
145°	903.5	902.7	901.9	901.1
147.5°	939.7	938.5	937.3	936.1
150°	972.9	971.7	970.4	969.2
152.5°	1004.5	1003.5	1002.4	1001.4
155°	1034.2	1032.8	1031.4	1030.0
157.5°	1060.3	1059.1	1057.9	1056.6
160°	1084.9	1084.1	1083.2	1082.4
162.5°	1106.0	1104.6	1103.2	1101.7
165°	1124.4	1123.0	1121.6	1120.2
167.5°	1140.4	1139.2	1137.9	1136.7
170°	1153.0	1151.5	1150.1	1148.7
172.5°	1162.2	1160.8	1159.3	1157.9
175°	1168.6	1167.2	1165.8	1164.3
177.5°	1172.3	1170.9	1169.4	1168.0
180°	1171.7	1171.7	1171.7	1171.7



TEST NUMBER: P832075

CATALOG NUMBER: S123RDIP-S340D1195U927-4F0-1E-UDD-G1

**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	5.80	6.46	6.95	7.59	9.16	10.46	11.12	11.61	12.25	13.83
	3H	7.01	7.60	8.16	8.73	10.32	11.95	12.54	13.10	13.68	15.27
	4H	7.38	7.94	8.54	9.08	10.67	12.43	12.99	13.59	14.13	15.72
	6H	7.66	8.17	8.82	9.31	10.91	12.74	13.25	13.90	14.39	16.00
	8H	7.74	8.23	8.91	9.38	10.98	12.81	13.30	13.98	14.45	16.05
	12H	7.78	8.25	8.96	9.39	11.01	12.84	13.30	14.01	14.45	16.07
4H	2H	6.50	7.06	7.67	8.20	9.80	10.44	11.00	11.61	12.13	13.73
	3H	7.86	8.32	9.03	9.49	11.09	12.08	12.55	13.25	13.71	15.32
	4H	8.31	8.73	9.48	9.89	11.51	12.68	13.11	13.86	14.26	15.89
	6H	8.67	9.03	9.84	10.20	11.82	13.11	13.48	14.29	14.65	16.27
	8H	8.79	9.13	9.96	10.29	11.93	13.24	13.58	14.42	14.75	16.38
	12H	8.86	9.17	10.05	10.34	11.98	13.29	13.60	14.49	14.78	16.41
8H	4H	8.61	8.95	9.79	10.11	11.75	12.64	12.98	13.81	14.14	15.78
	6H	9.07	9.35	10.26	10.55	12.18	13.13	13.41	14.32	14.62	16.25
	8H	9.26	9.50	10.46	10.69	12.34	13.31	13.56	14.52	14.74	16.39
	12H	9.40	9.61	10.60	10.79	12.47	13.42	13.64	14.63	14.82	16.50
12H	4H	8.61	8.92	9.80	10.10	11.73	12.58	12.89	13.77	14.07	15.70
	6H	9.13	9.37	10.33	10.55	12.20	13.10	13.35	14.30	14.53	16.18
	8H	9.34	9.55	10.54	10.73	12.41	13.29	13.50	14.49	14.68	16.37