

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: P831335

Luminaire Tested: S123DIP-S340D1025U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831335
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U935-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

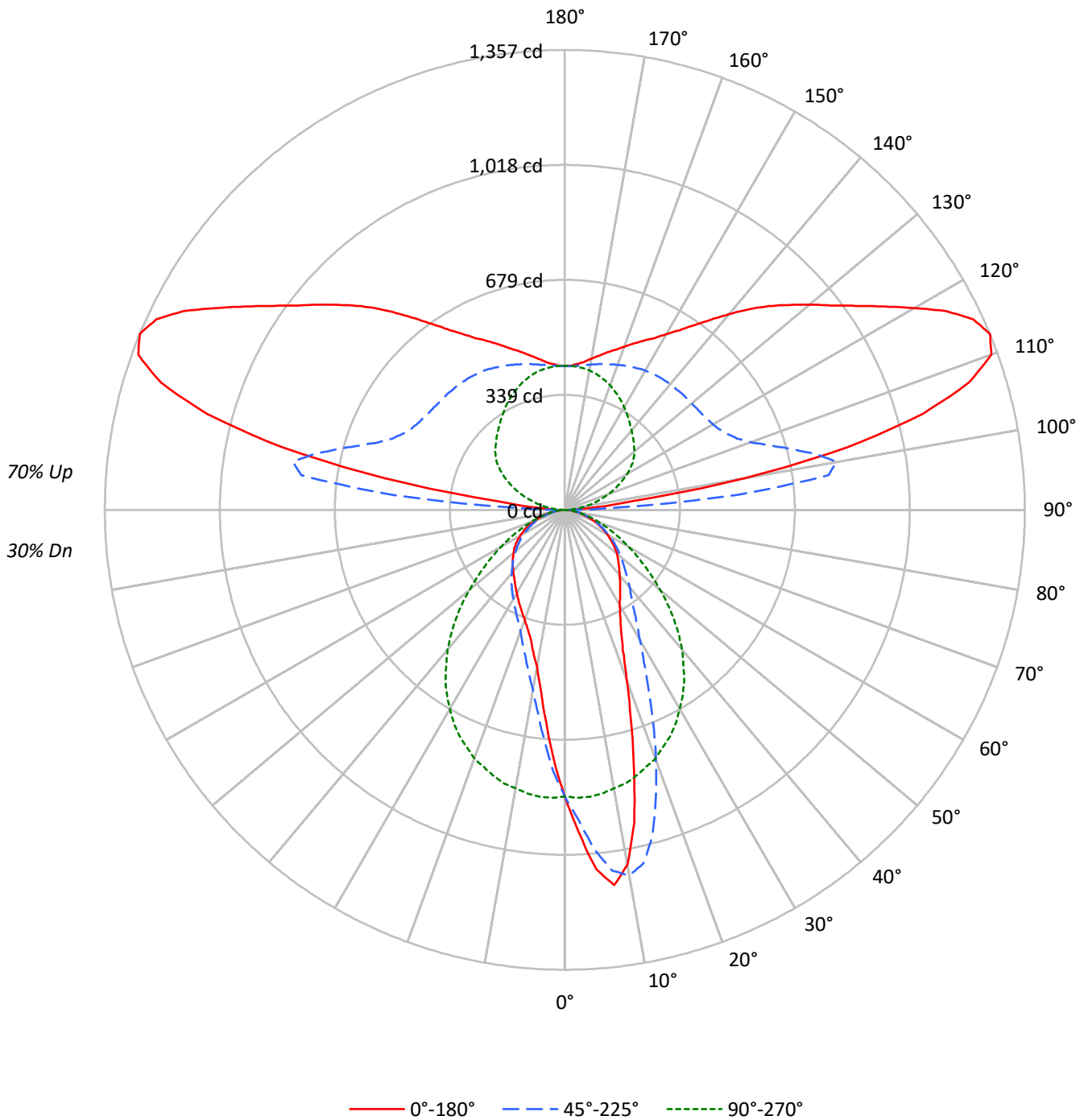
Lumens per Lamp: N/A
Luminaire Lumens: 4554.8 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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	92	92	92	92	72	72	72	54	54	54	38	38	38	30				30
1	94	89	86	83	84	80	77	75	64	62	60	48	47	46	34	33	32	26				26
2	85	78	73	68	76	71	66	62	56	53	50	43	40	39	30	29	28	22				22
3	78	69	62	57	70	62	57	52	50	46	42	38	35	33	27	25	24	19				19
4	72	61	54	48	64	56	49	44	44	40	36	34	31	29	24	23	21	17				17
5	66	55	47	42	59	50	43	38	40	35	31	31	27	25	22	20	19	15				15
6	61	49	42	36	54	45	38	33	36	31	28	28	25	22	20	18	17	13				13
7	56	45	37	32	50	40	34	29	33	28	24	25	22	20	19	17	15	12				12
8	52	40	33	28	47	37	30	26	30	25	22	23	20	18	17	15	13	11				11
9	49	37	30	25	44	34	27	23	27	23	20	22	18	16	16	14	12	10				10
10	45	34	27	22	41	31	25	21	25	21	18	20	17	14	15	13	11	9				9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9099	9099	9099	9099	9099
5°	11507	10861	9181	7398	6799
10°	11620	11970	9120	5898	5153
15°	8751	11115	9058	4995	4358
20°	6097	8993	8942	4368	3959
25°	4650	6916	8745	4018	3713
30°	4022	5495	8429	3771	3515
35°	3732	4639	8067	3593	3376
40°	3532	4162	7557	3423	3329
45°	3416	3851	6909	3290	3308
50°	3358	3607	6142	3170	3291
55°	3232	3427	5388	3055	3305
60°	3115	3233	4646	2947	3251
65°	2926	3051	4006	2832	3186
70°	2703	2820	3408	2640	2999
75°	2445	2529	2920	2454	2741
80°	2021	2213	2312	2139	2312
85°	1593	1791	1692	1815	1840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 7888 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	1.8
10°-20°	198.8	4.4
20°-30°	235.4	5.2
30°-40°	236.7	5.2
40°-50°	217.2	4.8
50°-60°	179.2	3.9
60°-70°	126.8	2.8
70°-80°	67.7	1.5
80°-90°	19.5	0.4
90°-100°	230.4	5.1
100°-110°	674.5	14.8
110°-120°	658.7	14.5
120°-130°	524.6	11.5
130°-140°	413.9	9.1
140°-150°	308.7	6.8
150°-160°	215.3	4.7
160°-170°	126.5	2.8
170°-180°	41.1	0.9
0°-30°	514.2	11.3
0°-40°	750.9	16.5
0°-60°	1147.3	25.2
0°-90°	1361.3	29.9
90°-120°	1563.5	34.3
90°-150°	2810.7	61.7
90°-180°	3194.0	70.1
0°-180°	4554.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	845	845	845	845	845	
5°	1065	1005	850	685	629	101
15°	785	997	813	448	391	217
25°	392	582	736	338	313	185
35°	284	353	614	273	257	178
45°	224	253	454	216	217	174
55°	172	183	287	163	176	154
65°	115	120	157	111	125	114
75°	59	61	70	59	66	62
85°	13	14	14	15	15	14
90°	25	22	2	22	25	14
95°	100	510	29	510	100	162
105°	1093	691	100	691	1093	1091
115°	1330	528	176	528	1330	1297
125°	1048	493	245	493	1048	949
135°	850	486	287	486	850	659
145°	664	480	327	480	664	422
155°	551	465	372	465	551	257
165°	480	445	406	445	480	137
175°	432	427	424	427	432	42
180°	425	425	425	425	425	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	952.8	951.9	950.9	946.0	941.1	938.7	936.4	929.3	922.2	914.4	906.5
5°	1065.0	1067.8	1070.5	1067.4	1064.2	1054.6	1045.0	1032.3	1019.5	1005.2	990.9
7.5°	1116.8	1118.4	1119.9	1118.0	1116.0	1113.5	1110.9	1099.5	1088.2	1073.5	1058.7
10°	1063.1	1066.6	1070.1	1077.8	1085.4	1094.1	1102.7	1101.1	1099.5	1095.2	1090.9
12.5°	945.0	949.3	953.6	968.9	984.2	1003.8	1023.4	1040.3	1057.2	1068.9	1080.7
15°	785.3	797.3	809.3	823.2	837.1	865.9	894.8	930.3	965.8	997.4	1028.9
17.5°	646.9	651.4	655.9	670.8	685.7	722.0	758.3	799.3	840.2	892.6	945.0
20°	532.3	536.4	540.6	560.2	579.8	608.2	636.7	682.8	728.8	785.1	841.4
22.5°	447.2	453.7	460.1	471.1	482.1	509.4	536.6	577.6	618.6	680.8	743.0
25°	391.5	396.2	400.9	407.6	414.2	436.0	457.8	491.5	525.3	582.3	639.4
27.5°	353.4	355.4	357.4	364.0	370.7	384.8	398.9	428.0	457.0	505.4	553.9
30°	323.6	325.0	326.4	332.3	338.1	347.8	357.4	378.3	399.3	442.1	484.9
32.5°	302.8	303.8	304.8	309.3	313.8	320.7	327.5	342.8	358.1	393.5	428.8
35°	284.0	284.6	285.2	288.5	291.9	297.0	302.1	313.6	325.2	353.0	380.9
37.5°	267.5	268.3	269.1	271.1	273.0	277.5	282.0	291.3	300.5	321.9	343.2
40°	251.4	252.8	254.2	255.6	256.9	260.7	264.4	271.5	278.5	296.2	313.8
42.5°	237.7	239.1	240.5	241.1	241.6	243.8	246.0	252.4	258.9	272.0	285.2
45°	224.4	225.0	225.6	226.1	226.7	228.5	230.3	236.0	241.6	253.0	264.4
47.5°	212.2	212.2	212.2	212.6	213.0	214.6	216.1	220.3	224.4	233.2	242.0
50°	200.5	200.5	200.5	199.9	199.3	200.3	201.2	204.4	207.5	215.4	223.2
52.5°	186.3	186.3	186.3	186.5	186.7	186.7	186.7	189.5	192.2	199.3	206.3
55°	172.2	173.0	173.8	173.2	172.6	173.0	173.4	175.2	176.9	182.6	188.3
57.5°	158.1	158.5	158.9	158.7	158.5	158.7	158.9	160.4	162.0	166.3	170.6
60°	144.7	144.7	144.7	144.4	144.0	144.4	144.7	145.5	146.3	150.2	154.2
62.5°	129.8	130.0	130.2	130.4	130.6	130.2	129.8	130.8	131.8	134.7	137.7
65°	114.9	115.1	115.3	115.9	116.5	116.1	115.7	116.7	117.7	119.8	122.0
67.5°	101.6	101.2	100.8	101.0	101.2	101.8	102.4	102.6	102.8	105.1	107.5
70°	85.9	86.3	86.7	86.5	86.3	86.5	86.7	87.3	87.9	89.6	91.4
72.5°	71.8	72.0	72.2	72.2	72.2	72.6	73.0	73.6	74.1	75.1	76.1
75°	58.8	58.8	58.8	59.2	59.6	59.8	60.0	60.0	60.0	60.8	61.6
77.5°	44.7	45.7	46.7	46.5	46.3	46.7	47.1	47.7	48.2	48.6	49.0
80°	32.6	32.6	32.6	32.8	33.0	33.5	34.1	34.5	34.9	35.7	36.5
82.5°	20.8	21.0	21.2	21.8	22.4	22.8	23.1	23.7	24.3	24.3	24.3
85°	12.9	12.6	12.2	12.6	12.9	13.3	13.7	13.9	14.1	14.5	14.9
87.5°	6.3	6.3	6.3	6.3	6.3	6.5	6.7	6.7	6.7	6.7	6.7
90°	24.9	25.8	24.9	24.1	24.9	23.2	22.3	21.5	20.6	21.5	18.9
92.5°	45.5	47.3	46.4	49.8	51.6	57.6	66.2	85.1	119.5	159.9	177.0
95°	99.7	103.1	109.1	116.9	133.2	164.2	209.7	309.4	413.4	509.6	453.8
97.5°	204.5	214.0	234.6	267.3	324.9	422.8	536.3	710.7	810.4	783.8	585.3
100°	538.9	538.0	571.5	634.3	721.1	843.1	943.7	1013.3	983.2	813.9	550.0
102.5°	853.4	878.3	905.0	951.4	1014.1	1080.3	1128.4	1113.8	991.8	758.0	498.5
105°	1093.2	1097.5	1125.0	1157.7	1197.2	1219.5	1203.2	1117.3	937.6	691.0	458.1
107.5°	1249.6	1259.1	1270.2	1285.7	1290.9	1267.7	1200.6	1065.7	860.3	631.7	428.9
110°	1339.0	1340.7	1342.4	1335.6	1311.5	1251.3	1143.0	984.9	788.1	582.7	413.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1357.0	1356.2	1347.6	1322.7	1273.7	1192.0	1067.4	905.0	725.4	550.0	404.8
115°	1329.5	1325.2	1308.1	1270.2	1205.8	1112.1	985.8	836.2	677.2	528.5	403.9
117.5°	1269.4	1263.4	1237.6	1195.5	1128.4	1031.3	915.3	782.9	645.4	513.9	404.8
120°	1190.3	1185.2	1164.5	1116.4	1048.5	961.7	858.6	742.5	621.4	504.5	408.2
122.5°	1116.4	1109.5	1086.3	1044.2	985.8	906.7	813.0	710.7	601.6	498.5	414.2
125°	1048.5	1042.5	1021.0	983.2	928.2	859.4	776.9	683.2	585.3	493.3	420.3
127.5°	990.1	984.9	965.1	932.5	882.6	819.0	743.4	658.3	569.8	490.7	427.1
130°	941.9	935.1	917.0	886.1	840.5	782.1	712.5	635.1	557.8	488.2	434.0
132.5°	894.7	890.4	874.9	844.0	801.8	746.8	683.2	613.6	546.6	487.3	439.2
135°	850.0	844.0	828.5	802.7	760.6	711.6	655.7	594.7	537.1	486.4	444.3
137.5°	802.7	797.6	784.7	758.0	721.9	678.1	628.2	576.7	528.5	484.7	447.8
140°	752.9	753.7	740.0	715.9	683.2	646.3	605.0	561.2	520.8	483.9	451.2
142.5°	706.5	707.3	695.3	674.7	648.0	617.1	582.7	546.6	513.9	482.1	453.8
145°	664.3	662.6	655.7	637.7	616.2	591.3	563.8	535.4	507.9	480.4	454.6
147.5°	628.2	627.4	620.5	607.6	590.4	572.4	549.2	526.0	501.9	477.8	454.6
150°	597.3	597.3	592.1	582.7	569.8	553.5	535.4	515.7	495.9	474.4	454.6
152.5°	571.5	571.5	568.9	560.3	550.9	538.0	522.5	506.2	489.0	470.1	452.1
155°	550.9	550.0	548.3	541.4	533.7	523.4	510.5	496.8	482.1	465.0	450.3
157.5°	531.1	531.1	529.4	524.3	517.4	508.8	498.5	486.4	474.4	460.7	447.8
160°	512.2	513.1	513.1	507.9	501.9	495.9	487.3	477.8	466.7	455.5	446.0
162.5°	495.0	495.9	495.9	491.6	488.2	483.0	475.3	467.5	458.9	450.3	442.6
165°	480.4	480.4	481.3	477.8	474.4	470.1	464.1	458.9	452.1	445.2	439.2
167.5°	465.8	465.8	466.7	464.1	462.4	458.9	455.5	451.2	445.2	440.0	435.7
170°	452.9	452.9	453.8	452.1	451.2	449.5	446.0	443.5	439.2	434.9	432.3
172.5°	440.9	441.7	443.5	441.7	441.7	440.9	438.3	436.6	433.2	430.6	429.7
175°	432.3	433.2	434.0	433.2	433.2	433.2	431.4	430.6	428.9	427.1	427.1
177.5°	426.3	426.3	428.0	427.1	428.0	428.0	427.1	426.3	425.4	424.6	425.4
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	904.2	901.8	893.2	884.6	874.8	865.0	857.7	850.4	839.7	828.9	820.0
5°	979.9	968.9	950.7	932.4	907.7	883.0	866.3	849.7	827.3	804.9	787.1
7.5°	1039.9	1021.1	995.6	970.1	937.7	905.4	874.8	844.2	810.0	775.9	748.1
10°	1078.2	1065.4	1036.0	1006.6	963.2	919.9	877.1	834.4	790.4	746.5	709.6
12.5°	1081.9	1083.1	1056.0	1028.9	979.9	930.9	878.9	826.9	771.6	716.3	673.3
15°	1049.1	1069.3	1054.4	1039.5	990.1	940.7	876.7	812.8	749.0	685.3	635.7
17.5°	988.3	1031.7	1033.8	1036.0	986.6	937.1	866.3	795.5	723.4	651.2	599.0
20°	905.4	969.3	991.3	1013.2	973.0	932.8	856.7	780.6	699.8	619.0	564.3
22.5°	820.6	898.3	938.5	978.7	948.9	919.1	838.1	757.1	671.8	586.4	530.9
25°	724.1	808.9	870.7	932.4	914.2	896.0	816.1	736.3	645.5	554.7	498.0
27.5°	640.0	726.1	800.6	875.2	871.2	867.3	788.1	708.8	615.9	522.9	468.2
30°	565.1	645.3	728.6	812.0	821.6	831.2	754.7	678.2	585.1	491.9	439.2
32.5°	498.8	568.8	658.2	747.7	766.5	785.3	716.3	647.3	555.1	462.9	412.1
35°	444.4	508.0	597.4	686.9	710.4	733.9	673.9	613.9	524.1	434.2	385.8
37.5°	396.4	449.5	536.8	624.1	652.9	681.8	628.0	574.3	490.1	406.0	361.5
40°	356.6	399.3	479.6	559.8	593.1	626.5	582.1	537.8	458.0	378.2	337.2
42.5°	323.2	361.3	434.1	506.8	538.8	570.8	533.3	495.8	424.8	353.8	316.4
45°	294.8	325.2	391.3	457.4	487.8	518.2	486.0	453.9	391.3	328.7	293.8
47.5°	268.1	294.2	350.7	407.2	434.2	461.3	436.2	411.1	358.1	305.2	273.6
50°	244.2	265.2	314.6	364.0	387.6	411.1	388.9	366.8	323.2	279.7	252.2
52.5°	223.4	240.5	281.8	323.2	343.4	363.6	344.6	325.6	291.1	256.5	232.6
55°	202.8	217.3	253.2	289.1	302.8	316.6	301.9	287.1	259.3	231.4	211.2
57.5°	183.6	196.5	225.9	255.4	266.0	276.6	263.2	249.9	228.9	207.9	191.0
60°	164.8	175.3	199.9	224.4	230.9	237.3	226.5	215.8	201.0	186.3	171.2
62.5°	147.3	156.9	175.2	193.4	197.7	202.0	193.8	185.5	174.4	163.2	151.4
65°	129.3	136.5	151.4	166.3	169.1	171.8	164.6	157.3	148.9	140.4	131.8
67.5°	112.6	117.7	129.8	142.0	142.2	142.4	136.5	130.6	125.9	121.2	114.3
70°	96.3	101.2	109.2	117.3	117.5	117.7	113.0	108.3	104.7	101.2	96.1
72.5°	79.6	83.2	89.2	95.3	94.9	94.5	91.6	88.7	85.9	83.2	79.4
75°	64.5	67.5	71.6	75.7	74.5	73.4	71.8	70.2	67.9	65.5	63.2
77.5°	50.8	52.6	54.9	57.3	56.5	55.7	54.3	53.0	51.2	49.4	48.4
80°	37.3	38.1	39.6	41.2	40.8	40.4	38.8	37.3	36.9	36.5	35.1
82.5°	25.3	26.3	26.7	27.1	26.9	26.7	25.5	24.3	23.9	23.5	23.3
85°	15.1	15.3	15.5	15.7	15.1	14.5	14.1	13.7	13.7	13.7	13.5
87.5°	6.9	7.1	7.1	7.1	6.9	6.7	6.3	5.9	6.1	6.3	6.3
90°	16.3	13.8	11.2	9.5	7.7	5.2	3.4	1.7	3.4	5.2	7.7
92.5°	132.4	86.8	59.3	43.8	35.2	27.5	18.9	12.9	18.9	27.5	35.2
95°	312.8	184.8	111.7	78.2	55.9	41.3	31.8	29.2	31.8	41.3	55.9
97.5°	348.1	199.4	127.2	90.2	67.9	55.0	47.3	46.4	47.3	55.0	67.9
100°	324.0	196.8	136.6	103.1	82.5	70.5	64.5	63.6	64.5	70.5	82.5
102.5°	303.4	200.2	147.8	117.7	99.7	88.5	83.4	81.6	83.4	88.5	99.7
105°	295.6	207.1	160.7	134.1	117.7	107.4	102.3	99.7	102.3	107.4	117.7
107.5°	293.9	218.3	177.0	152.1	136.6	126.3	121.2	118.6	121.2	126.3	136.6
110°	298.2	232.9	194.2	170.2	155.6	146.1	141.8	139.2	141.8	146.1	155.6



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	306.8	247.5	212.3	189.1	174.5	165.0	160.7	158.1	160.7	165.0	174.5
115°	316.3	263.8	231.2	208.0	193.4	184.8	179.6	176.2	179.6	184.8	193.4
117.5°	328.3	281.0	248.4	226.9	210.6	202.8	198.5	194.2	198.5	202.8	210.6
120°	342.1	297.4	266.4	244.9	228.6	220.0	215.7	213.1	215.7	220.0	228.6
122.5°	354.9	314.6	284.5	261.3	245.8	236.3	232.0	229.5	232.0	236.3	245.8
125°	368.7	330.9	300.8	277.6	261.3	251.8	246.7	244.9	246.7	251.8	261.3
127.5°	379.9	345.5	316.3	293.1	275.0	265.6	259.5	257.0	259.5	265.6	275.0
130°	391.0	358.4	330.0	306.8	288.8	278.5	270.7	268.1	270.7	278.5	288.8
132.5°	401.4	369.6	342.1	319.7	301.7	288.8	280.2	276.7	280.2	288.8	301.7
135°	409.9	380.7	354.1	330.9	312.8	299.9	290.5	287.0	290.5	299.9	312.8
137.5°	416.8	388.5	362.7	341.2	323.1	309.4	299.9	296.5	299.9	309.4	323.1
140°	422.0	396.2	371.3	349.8	332.6	318.8	310.3	306.0	310.3	318.8	332.6
142.5°	427.1	402.2	378.1	358.4	341.2	329.2	319.7	316.3	319.7	329.2	341.2
145°	430.6	407.4	385.0	365.3	350.6	337.8	330.0	327.4	330.0	337.8	350.6
147.5°	433.2	411.7	391.0	373.9	359.2	348.1	340.3	338.6	340.3	348.1	359.2
150°	434.0	416.0	396.2	380.7	368.7	357.5	350.6	349.8	350.6	357.5	368.7
152.5°	435.7	418.5	402.2	387.6	377.3	367.8	361.0	361.0	361.0	367.8	377.3
155°	435.7	422.0	407.4	395.3	385.9	377.3	372.1	372.1	372.1	377.3	385.9
157.5°	436.6	423.7	411.7	402.2	393.6	385.9	381.6	380.7	381.6	385.9	393.6
160°	436.6	426.3	416.0	407.4	401.4	394.5	391.0	391.0	391.0	394.5	401.4
162.5°	435.7	427.1	418.5	411.7	406.5	401.4	398.8	398.8	398.8	401.4	406.5
165°	434.0	428.0	421.1	415.1	411.7	407.4	405.7	406.5	405.7	407.4	411.7
167.5°	433.2	428.0	422.8	418.5	416.0	412.5	411.7	412.5	411.7	412.5	416.0
170°	430.6	427.1	422.8	421.1	419.4	416.8	416.0	417.7	416.0	416.8	419.4
172.5°	429.7	427.1	423.7	422.8	422.0	420.3	420.3	421.1	420.3	420.3	422.0
175°	428.0	426.3	424.6	423.7	423.7	422.0	422.8	423.7	422.8	422.0	423.7
177.5°	427.1	425.4	424.6	424.6	424.6	423.7	424.6	425.4	424.6	423.7	424.6
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	811.2	803.6	795.9	790.0	784.2	774.2	764.1	761.8	759.4	756.1	752.8
5°	769.2	750.4	731.6	714.7	697.9	684.7	671.6	662.9	654.3	648.0	641.8
7.5°	720.2	692.0	663.7	643.7	623.7	604.7	585.7	579.6	573.5	565.3	557.0
10°	672.7	641.6	610.4	584.3	558.2	539.6	520.9	513.5	506.0	495.6	485.2
12.5°	630.4	596.3	562.1	535.8	509.6	491.5	473.5	462.7	451.9	446.0	440.1
15°	586.1	549.6	513.1	488.8	464.5	448.2	431.9	422.5	413.1	407.4	401.7
17.5°	546.8	510.7	474.7	451.3	428.0	413.1	398.2	389.9	381.7	377.4	373.1
20°	509.6	474.3	439.0	416.2	393.5	381.3	369.1	363.8	358.5	355.0	351.5
22.5°	475.4	440.7	406.0	386.6	367.2	357.4	347.6	343.8	340.1	337.2	334.2
25°	441.3	410.3	379.3	362.9	346.4	338.3	330.3	326.6	322.8	319.9	317.0
27.5°	413.5	383.8	354.2	340.1	326.0	319.7	313.4	310.5	307.5	304.8	302.1
30°	386.4	359.9	333.4	321.3	309.1	303.4	297.7	294.8	291.9	289.3	286.8
32.5°	361.3	338.5	315.8	304.6	293.4	288.7	284.0	280.5	276.9	275.0	273.0
35°	337.4	317.0	296.6	287.3	278.1	273.4	268.7	265.8	262.8	261.3	259.7
37.5°	317.0	298.7	280.5	271.6	262.8	258.3	253.8	251.3	248.7	248.1	247.5
40°	296.2	280.5	264.8	256.2	247.5	243.6	239.7	238.1	236.5	236.1	235.8
42.5°	278.9	263.6	248.3	240.5	232.6	229.3	225.9	225.2	224.4	225.0	225.6
45°	258.9	246.2	233.4	226.1	218.9	216.1	213.4	212.8	212.2	213.4	214.6
47.5°	242.0	230.3	218.5	211.6	204.8	202.8	200.8	200.6	200.5	202.0	203.6
50°	224.8	213.4	202.0	196.5	191.0	189.3	187.5	188.1	188.7	191.2	193.8
52.5°	208.7	198.1	187.5	182.4	177.3	176.1	175.0	176.3	177.7	180.4	183.2
55°	191.0	181.4	171.8	167.9	164.0	162.8	161.6	164.4	167.1	169.7	172.2
57.5°	174.2	165.7	157.3	153.8	150.2	150.0	149.8	152.4	154.9	157.7	160.4
60°	156.1	149.1	142.0	139.3	136.5	136.9	137.3	140.2	143.2	145.3	147.5
62.5°	139.6	133.8	127.9	125.3	122.8	123.8	124.7	127.7	130.6	133.2	135.7
65°	123.2	118.3	113.4	111.6	109.8	111.2	112.6	115.1	117.7	119.4	121.2
67.5°	107.5	103.4	99.2	97.9	96.5	97.9	99.2	101.8	104.3	106.1	107.9
70°	91.0	87.7	84.3	83.4	82.4	83.9	85.5	87.7	89.8	91.6	93.4
72.5°	75.7	73.2	70.6	70.4	70.2	71.6	73.0	75.1	77.3	78.5	79.6
75°	60.8	59.4	58.1	57.9	57.7	59.0	60.4	61.6	62.8	63.7	64.7
77.5°	47.5	46.3	45.1	45.3	45.5	46.5	47.5	48.6	49.8	50.4	51.0
80°	33.7	33.3	33.0	33.3	33.7	34.5	35.3	36.1	36.9	37.3	37.7
82.5°	23.1	22.8	22.4	22.9	23.5	24.1	24.7	25.3	25.9	26.1	26.3
85°	13.3	13.9	14.5	14.5	14.5	14.7	14.9	15.1	15.3	15.1	14.9
87.5°	6.3	6.5	6.7	6.7	6.7	6.9	7.1	7.1	7.1	6.9	6.7
90°	9.5	11.2	13.8	16.3	18.9	21.5	20.6	21.5	22.3	23.2	24.9
92.5°	43.8	59.3	86.8	132.4	177.0	159.9	119.5	85.1	66.2	57.6	51.6
95°	78.2	111.7	184.8	312.8	453.8	509.6	413.4	309.4	209.7	164.2	133.2
97.5°	90.2	127.2	199.4	348.1	585.3	783.8	810.4	710.7	536.3	422.8	324.9
100°	103.1	136.6	196.8	324.0	550.0	813.9	983.2	1013.3	943.7	843.1	721.1
102.5°	117.7	147.8	200.2	303.4	498.5	758.0	991.8	1113.8	1128.4	1080.3	1014.1
105°	134.1	160.7	207.1	295.6	458.1	691.0	937.6	1117.3	1203.2	1219.5	1197.2
107.5°	152.1	177.0	218.3	293.9	428.9	631.7	860.3	1065.7	1200.6	1267.7	1290.9
110°	170.2	194.2	232.9	298.2	413.4	582.7	788.1	984.9	1143.0	1251.3	1311.5



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	189.1	212.3	247.5	306.8	404.8	550.0	725.4	905.0	1067.4	1192.0	1273.7
115°	208.0	231.2	263.8	316.3	403.9	528.5	677.2	836.2	985.8	1112.1	1205.8
117.5°	226.9	248.4	281.0	328.3	404.8	513.9	645.4	782.9	915.3	1031.3	1128.4
120°	244.9	266.4	297.4	342.1	408.2	504.5	621.4	742.5	858.6	961.7	1048.5
122.5°	261.3	284.5	314.6	354.9	414.2	498.5	601.6	710.7	813.0	906.7	985.8
125°	277.6	300.8	330.9	368.7	420.3	493.3	585.3	683.2	776.9	859.4	928.2
127.5°	293.1	316.3	345.5	379.9	427.1	490.7	569.8	658.3	743.4	819.0	882.6
130°	306.8	330.0	358.4	391.0	434.0	488.2	557.8	635.1	712.5	782.1	840.5
132.5°	319.7	342.1	369.6	401.4	439.2	487.3	546.6	613.6	683.2	746.8	801.8
135°	330.9	354.1	380.7	409.9	444.3	486.4	537.1	594.7	655.7	711.6	760.6
137.5°	341.2	362.7	388.5	416.8	447.8	484.7	528.5	576.7	628.2	678.1	721.9
140°	349.8	371.3	396.2	422.0	451.2	483.9	520.8	561.2	605.0	646.3	683.2
142.5°	358.4	378.1	402.2	427.1	453.8	482.1	513.9	546.6	582.7	617.1	648.0
145°	365.3	385.0	407.4	430.6	454.6	480.4	507.9	535.4	563.8	591.3	616.2
147.5°	373.9	391.0	411.7	433.2	454.6	477.8	501.9	526.0	549.2	572.4	590.4
150°	380.7	396.2	416.0	434.0	454.6	474.4	495.9	515.7	535.4	553.5	569.8
152.5°	387.6	402.2	418.5	435.7	452.1	470.1	489.0	506.2	522.5	538.0	550.9
155°	395.3	407.4	422.0	435.7	450.3	465.0	482.1	496.8	510.5	523.4	533.7
157.5°	402.2	411.7	423.7	436.6	447.8	460.7	474.4	486.4	498.5	508.8	517.4
160°	407.4	416.0	426.3	436.6	446.0	455.5	466.7	477.8	487.3	495.9	501.9
162.5°	411.7	418.5	427.1	435.7	442.6	450.3	458.9	467.5	475.3	483.0	488.2
165°	415.1	421.1	428.0	434.0	439.2	445.2	452.1	458.9	464.1	470.1	474.4
167.5°	418.5	422.8	428.0	433.2	435.7	440.0	445.2	451.2	455.5	458.9	462.4
170°	421.1	422.8	427.1	430.6	432.3	434.9	439.2	443.5	446.0	449.5	451.2
172.5°	422.8	423.7	427.1	429.7	429.7	430.6	433.2	436.6	438.3	440.9	441.7
175°	423.7	424.6	426.3	428.0	427.1	427.1	428.9	430.6	431.4	433.2	433.2
177.5°	424.6	424.6	425.4	427.1	425.4	424.6	425.4	426.3	427.1	428.0	428.0
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	845.3	845.3	845.3	845.3
2.5°	751.4	750.0	744.5	739.0
5°	637.1	632.3	630.8	629.2
7.5°	556.6	556.2	548.0	539.8
10°	485.8	486.4	479.0	471.5
12.5°	435.2	430.3	429.7	429.1
15°	397.2	392.7	391.9	391.1
17.5°	370.3	367.6	366.8	366.0
20°	349.9	348.3	347.0	345.6
22.5°	332.3	330.3	329.1	327.9
25°	315.2	313.4	313.0	312.6
27.5°	299.9	297.7	297.7	297.7
30°	285.4	284.0	283.4	282.8
32.5°	271.8	270.7	270.7	270.7
35°	259.1	258.5	257.7	256.9
37.5°	247.5	247.5	247.1	246.7
40°	236.3	236.9	236.9	236.9
42.5°	226.1	226.7	226.7	226.7
45°	215.6	216.5	216.9	217.3
47.5°	205.2	206.7	207.1	207.5
50°	195.0	196.1	196.3	196.5
52.5°	184.6	185.9	186.9	187.9
55°	173.6	175.0	175.5	176.1
57.5°	161.8	163.2	163.4	163.6
60°	148.9	150.2	150.6	151.0
62.5°	136.5	137.3	137.7	138.1
65°	122.4	123.6	124.4	125.1
67.5°	108.9	109.8	109.8	109.8
70°	93.8	94.1	94.7	95.3
72.5°	79.8	80.0	80.0	80.0
75°	65.1	65.5	65.7	65.9
77.5°	51.2	51.4	51.4	51.4
80°	37.5	37.3	37.3	37.3
82.5°	25.7	25.1	25.1	25.1
85°	14.7	14.5	14.7	14.9
87.5°	6.7	6.7	6.7	6.7
90°	24.1	24.9	25.8	24.9
92.5°	49.8	46.4	47.3	45.5
95°	116.9	109.1	103.1	99.7
97.5°	267.3	234.6	214.0	204.5
100°	634.3	571.5	538.0	538.9
102.5°	951.4	905.0	878.3	853.4
105°	1157.7	1125.0	1097.5	1093.2
107.5°	1285.7	1270.2	1259.1	1249.6
110°	1335.6	1342.4	1340.7	1339.0



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	<i>1322.7</i>	<i>1347.6</i>	<i>1356.2</i>	<i>1357.0</i>
115°	1270.2	1308.1	1325.2	1329.5
117.5°	1195.5	1237.6	1263.4	1269.4
120°	1116.4	1164.5	1185.2	1190.3
122.5°	1044.2	1086.3	1109.5	1116.4
125°	983.2	1021.0	1042.5	1048.5
127.5°	932.5	965.1	984.9	990.1
130°	886.1	917.0	935.1	941.9
132.5°	844.0	874.9	890.4	894.7
135°	802.7	828.5	844.0	850.0
137.5°	758.0	784.7	797.6	802.7
140°	715.9	740.0	753.7	752.9
142.5°	674.7	695.3	707.3	706.5
145°	637.7	655.7	662.6	664.3
147.5°	607.6	620.5	627.4	628.2
150°	582.7	592.1	597.3	597.3
152.5°	560.3	568.9	571.5	571.5
155°	541.4	548.3	550.0	550.9
157.5°	524.3	529.4	531.1	531.1
160°	507.9	513.1	513.1	512.2
162.5°	491.6	495.9	495.9	495.0
165°	477.8	481.3	480.4	480.4
167.5°	464.1	466.7	465.8	465.8
170°	452.1	453.8	452.9	452.9
172.5°	441.7	443.5	441.7	440.9
175°	433.2	434.0	433.2	432.3
177.5°	427.1	428.0	426.3	426.3
180°	424.6	424.6	424.6	424.6



TEST NUMBER: P831335

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-G4

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	8.99	9.68	10.11	10.78	12.32	11.22	11.91	12.34	13.02	14.55
	3H	10.62	11.24	11.75	12.35	13.91	12.64	13.25	13.76	14.37	15.92
	4H	11.19	11.78	12.33	12.89	14.45	13.08	13.66	14.22	14.78	16.34
	6H	11.55	12.09	12.70	13.21	14.78	13.35	13.88	14.49	15.00	16.57
	8H	11.65	12.16	12.79	13.29	14.85	13.40	13.91	14.55	15.05	16.61
	12H	11.69	12.17	12.84	13.30	14.88	13.42	13.90	14.57	15.03	16.61
4H	2H	9.54	10.13	10.69	11.24	12.80	11.37	11.95	12.51	13.07	14.62
	3H	11.36	11.84	12.50	12.99	14.55	12.97	13.46	14.12	14.60	16.17
	4H	12.05	12.49	13.20	13.63	15.21	13.55	14.00	14.70	15.13	16.72
	6H	12.51	12.90	13.67	14.05	15.63	13.94	14.33	15.10	15.48	17.06
	8H	12.65	13.00	13.80	14.15	15.75	14.05	14.41	15.21	15.56	17.15
	12H	12.71	13.03	13.88	14.19	15.79	14.09	14.41	15.26	15.57	17.17
8H	4H	12.30	12.66	13.46	13.80	15.40	13.64	14.00	14.80	15.15	16.74
	6H	12.88	13.18	14.06	14.37	15.96	14.14	14.43	15.31	15.62	17.21
	8H	13.09	13.35	14.27	14.51	16.13	14.32	14.57	15.50	15.74	17.35
	12H	13.21	13.43	14.39	14.60	16.24	14.41	14.64	15.60	15.80	17.45
12H	4H	12.29	12.62	13.47	13.77	15.37	13.61	13.93	14.78	15.09	16.69
	6H	12.93	13.19	14.11	14.36	15.97	14.15	14.41	15.33	15.58	17.19
	8H	13.16	13.38	14.34	14.55	16.20	14.34	14.57	15.53	15.73	17.38