

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: P831365

Luminaire Tested: S123DIP-S340D1195U940-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831365
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-S340D1195U940-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

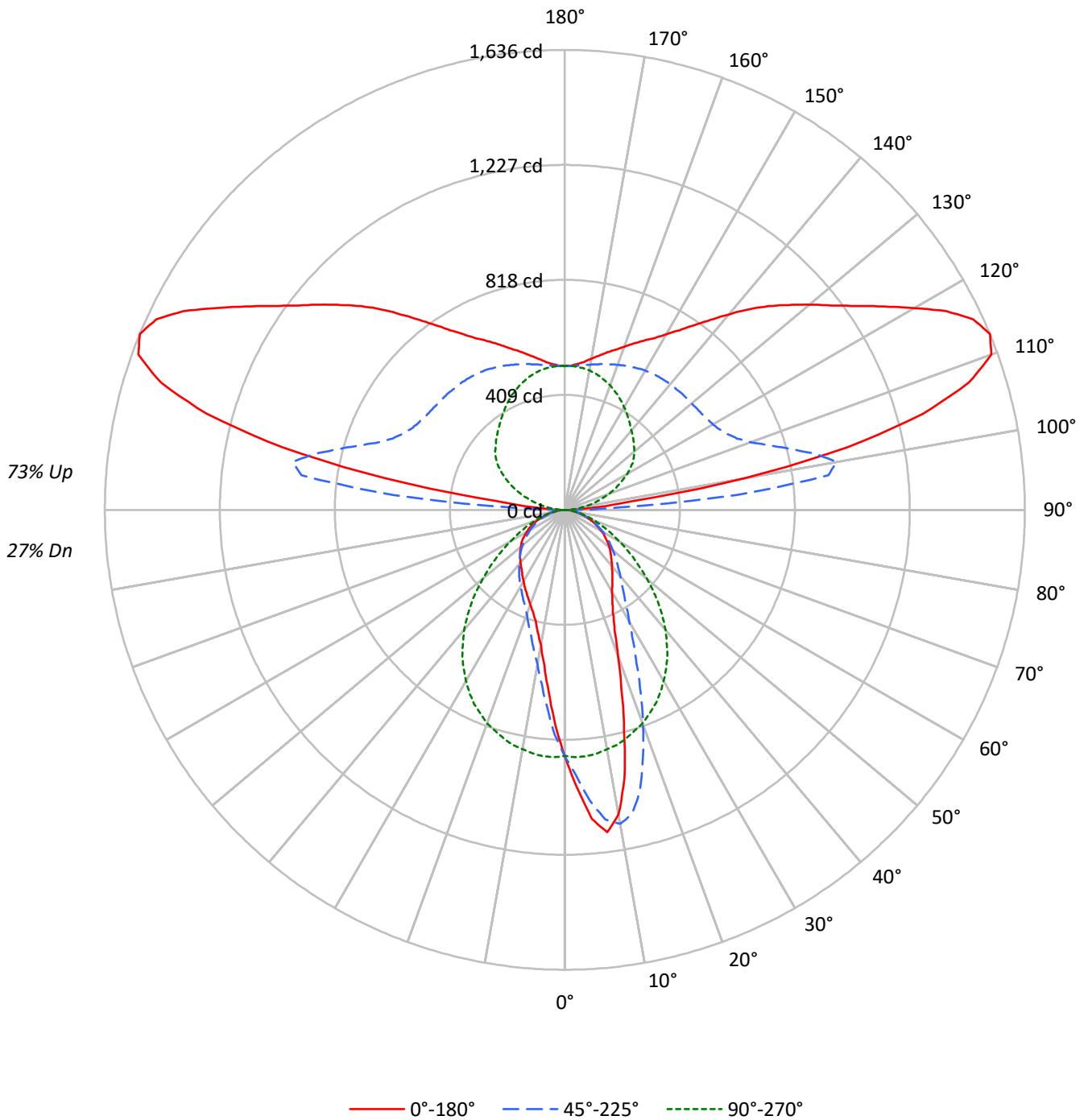
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5260.0 lumens
Efficiency: N/A
Efficacy: 121.2 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): 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

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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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	93	89	85	82	83	79	76	74	62	60	58	46	45	44	31	30	30	23
2	85	78	72	67	75	70	65	61	55	51	49	41	39	37	28	27	26	20
3	77	69	62	56	69	62	56	51	48	44	41	36	34	31	25	23	22	17
4	71	61	53	48	63	55	48	44	43	39	35	32	30	27	22	21	19	15
5	65	54	47	41	58	49	42	37	39	34	31	29	26	24	20	19	17	13
6	60	49	41	36	54	44	37	33	35	30	27	27	23	21	19	17	15	12
7	56	44	36	31	50	40	33	29	32	27	24	24	21	19	17	15	14	11
8	52	40	33	28	46	36	30	25	29	24	21	22	19	17	16	14	12	10
9	48	36	29	25	43	33	27	23	27	22	19	20	17	15	15	13	11	9
10	45	33	27	22	40	30	24	20	24	20	17	19	16	14	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9424	9424	9424	9424	9424
5°	11918	11249	9508	7662	7042
10°	12034	12398	9445	6108	5337
15°	9063	11510	9381	5173	4513
20°	6315	9314	9261	4523	4100
25°	4816	7163	9057	4162	3846
30°	4166	5691	8730	3905	3640
35°	3865	4804	8355	3721	3497
40°	3659	4310	7827	3545	3448
45°	3538	3988	7155	3408	3427
50°	3476	3734	6362	3282	3408
55°	3348	3549	5581	3164	3423
60°	3227	3350	4809	3053	3367
65°	3031	3161	4149	2934	3301
70°	2801	2921	3528	2735	3106
75°	2533	2620	3023	2541	2840
80°	2089	2294	2393	2219	2393
85°	1655	1853	1754	1877	1902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 8170 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	1.6
10°-20°	205.9	3.9
20°-30°	243.8	4.6
30°-40°	245.1	4.7
40°-50°	224.9	4.3
50°-60°	185.6	3.5
60°-70°	131.3	2.5
70°-80°	70.1	1.3
80°-90°	20.6	0.4
90°-100°	277.7	5.3
100°-110°	813.1	15.5
110°-120°	794.0	15.1
120°-130°	632.3	12.0
130°-140°	498.9	9.5
140°-150°	372.2	7.1
150°-160°	259.5	4.9
160°-170°	152.4	2.9
170°-180°	49.6	0.9
0°-30°	532.5	10.1
0°-40°	777.6	14.8
0°-60°	1188.2	22.6
0°-90°	1410.2	26.8
90°-120°	1884.8	35.8
90°-150°	3388.3	64.4
90°-180°	3850.0	73.2
0°-180°	5260.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	876	876	876	876	876	
5°	1103	1041	880	709	652	105
15°	813	1033	842	464	405	225
25°	406	603	763	350	324	191
35°	294	366	636	283	266	185
45°	232	262	470	224	225	180
55°	178	189	297	169	182	160
65°	119	124	163	115	130	118
75°	61	63	73	61	68	64
85°	13	15	14	15	15	15
90°	30	26	2	26	30	17
95°	120	614	35	614	120	195
105°	1318	833	120	833	1318	1315
115°	1603	637	212	637	1603	1563
125°	1264	595	295	595	1264	1144
135°	1025	586	346	586	1025	795
145°	801	579	395	579	801	509
155°	664	560	449	560	664	309
165°	579	537	490	537	579	165
175°	521	515	511	515	521	51
180°	512	512	512	512	512	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	986.8	985.8	984.8	979.7	974.6	972.2	969.8	962.4	955.1	947.0	938.9
5°	1103.0	1105.9	1108.7	1105.5	1102.2	1092.2	1082.3	1069.1	1055.9	1041.1	1026.2
7.5°	1156.6	1158.3	1159.9	1157.9	1155.8	1153.2	1150.5	1138.8	1127.0	1111.7	1096.5
10°	1101.0	1104.6	1108.3	1116.2	1124.1	1133.1	1142.0	1140.4	1138.8	1134.3	1129.8
12.5°	978.7	983.2	987.6	1003.5	1019.3	1039.6	1059.9	1077.4	1094.9	1107.1	1119.3
15°	813.3	825.7	838.1	852.5	867.0	896.8	926.7	963.5	1000.2	1032.9	1065.6
17.5°	669.9	674.6	679.3	694.7	710.2	747.7	785.3	827.8	870.2	924.5	978.7
20°	551.3	555.6	559.8	580.1	600.5	629.9	659.4	707.1	754.8	813.1	871.4
22.5°	463.1	469.8	476.6	487.9	499.3	527.5	555.8	598.2	640.7	705.1	769.5
25°	405.5	410.3	415.2	422.1	429.0	451.6	474.1	509.1	544.0	603.1	662.2
27.5°	366.0	368.1	370.1	377.0	383.9	398.5	413.2	443.2	473.3	523.5	573.6
30°	335.2	336.6	338.0	344.1	350.2	360.2	370.1	391.8	413.6	457.9	502.1
32.5°	313.6	314.7	315.7	320.3	325.0	332.1	339.2	355.1	370.9	407.5	444.0
35°	294.1	294.7	295.4	298.8	302.3	307.5	312.8	324.8	336.8	365.6	394.5
37.5°	277.1	277.9	278.7	280.7	282.8	287.4	292.1	301.7	311.2	333.3	355.5
40°	260.4	261.8	263.3	264.7	266.1	270.0	273.8	281.1	288.4	306.7	325.0
42.5°	246.2	247.6	249.0	249.7	250.3	252.5	254.7	261.4	268.1	281.7	295.4
45°	232.4	233.0	233.6	234.2	234.8	236.7	238.5	244.4	250.3	262.0	273.8
47.5°	219.8	219.8	219.8	220.2	220.6	222.2	223.9	228.1	232.4	241.5	250.7
50°	207.6	207.6	207.6	207.0	206.4	207.4	208.4	211.7	214.9	223.0	231.2
52.5°	193.0	193.0	193.0	193.2	193.4	193.4	193.4	196.2	199.1	206.4	213.7
55°	178.4	179.2	180.0	179.4	178.8	179.2	179.6	181.4	183.2	189.1	195.0
57.5°	163.7	164.1	164.5	164.3	164.1	164.3	164.5	166.2	167.8	172.3	176.7
60°	149.9	149.9	149.9	149.5	149.1	149.5	149.9	150.7	151.5	155.6	159.7
62.5°	134.5	134.7	134.9	135.1	135.3	134.9	134.5	135.5	136.5	139.6	142.6
65°	119.0	119.2	119.4	120.1	120.7	120.3	119.8	120.9	121.9	124.1	126.3
67.5°	105.2	104.8	104.4	104.6	104.8	105.4	106.0	106.2	106.4	108.9	111.3
70°	89.0	89.4	89.8	89.6	89.4	89.6	89.8	90.4	91.0	92.8	94.7
72.5°	74.3	74.5	74.8	74.8	74.8	75.2	75.6	76.2	76.8	77.8	78.8
75°	60.9	60.9	60.9	61.3	61.8	62.0	62.2	62.2	62.2	63.0	63.8
77.5°	46.3	47.3	48.3	48.1	47.9	48.3	48.8	49.4	50.0	50.4	50.8
80°	33.7	33.7	33.7	33.9	34.1	34.7	35.3	35.8	36.2	37.0	37.8
82.5°	21.5	21.7	21.9	22.5	23.2	23.6	24.0	24.6	25.2	25.2	25.2
85°	13.4	13.0	12.6	13.0	13.4	13.8	14.2	14.4	14.6	15.0	15.4
87.5°	6.5	6.5	6.5	6.5	6.5	6.7	6.9	6.9	6.9	6.9	6.9
90°	30.0	31.1	30.0	29.0	30.0	28.0	26.9	25.9	24.9	25.9	22.8
92.5°	54.9	57.0	55.9	60.1	62.2	69.4	79.8	102.6	144.0	192.7	213.4
95°	120.2	124.3	131.6	140.9	160.6	197.9	252.8	373.0	498.3	614.4	547.0
97.5°	246.6	258.0	282.8	322.2	391.6	509.7	646.5	856.8	977.0	944.9	705.5
100°	649.6	648.6	689.0	764.6	869.2	1016.3	1137.6	1221.5	1185.2	981.1	663.1
102.5°	1028.8	1058.8	1090.9	1146.9	1222.5	1302.3	1360.3	1342.7	1195.6	913.8	600.9
105°	1317.8	1323.0	1356.2	1395.5	1443.2	1470.1	1450.4	1346.8	1130.3	833.0	552.2
107.5°	1506.4	1517.8	1531.3	1549.9	1556.1	1528.1	1447.3	1284.7	1037.1	761.5	517.0
110°	1614.1	1616.2	1618.3	1610.0	1581.0	1508.5	1377.9	1187.3	950.0	702.4	498.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1635.9	1634.9	1624.5	1594.5	1535.4	1437.0	1286.8	1090.9	874.4	663.1	488.0
115°	1602.7	1597.6	1576.8	1531.3	1453.6	1340.6	1188.3	1008.1	816.4	637.2	486.9
117.5°	1530.2	1523.0	1491.9	1441.1	1360.3	1243.2	1103.4	943.8	778.1	619.5	488.0
120°	1434.9	1428.7	1403.8	1345.8	1264.0	1159.3	1035.0	895.1	749.1	608.2	492.1
122.5°	1345.8	1337.5	1309.5	1258.8	1188.3	1093.0	980.1	856.8	725.2	600.9	499.4
125°	1264.0	1256.7	1230.8	1185.2	1118.9	1036.0	936.6	823.6	705.5	594.7	506.6
127.5°	1193.5	1187.3	1163.5	1124.1	1064.0	987.3	896.2	793.6	686.9	591.6	514.9
130°	1135.5	1127.2	1105.4	1068.1	1013.2	942.8	858.9	765.6	672.4	588.5	523.2
132.5°	1078.5	1073.3	1054.7	1017.4	966.6	900.3	823.6	739.7	658.9	587.4	529.4
135°	1024.6	1017.4	998.7	967.7	916.9	857.8	790.5	716.9	647.5	586.4	535.6
137.5°	967.7	961.4	945.9	913.8	870.3	817.4	757.3	695.2	637.2	584.3	539.8
140°	907.6	908.6	892.0	863.0	823.6	779.1	729.4	676.5	627.8	583.3	543.9
142.5°	851.6	852.7	838.1	813.3	781.2	743.9	702.4	658.9	619.5	581.2	547.0
145°	800.9	798.8	790.5	768.7	742.8	712.8	679.6	645.4	612.3	579.1	548.1
147.5°	757.3	756.3	748.0	732.5	711.8	690.0	662.0	634.1	605.0	576.0	548.1
150°	720.0	720.0	713.8	702.4	686.9	667.2	645.4	621.6	597.8	571.9	548.1
152.5°	689.0	689.0	685.9	675.5	664.1	648.6	629.9	610.2	589.5	566.7	545.0
155°	664.1	663.1	661.0	652.7	643.4	630.9	615.4	598.8	581.2	560.5	542.9
157.5°	640.3	640.3	638.2	632.0	623.7	613.3	600.9	586.4	571.9	555.3	539.8
160°	617.5	618.5	618.5	612.3	605.0	597.8	587.4	576.0	562.6	549.1	537.7
162.5°	596.8	597.8	597.8	592.6	588.5	582.2	572.9	563.6	553.2	542.9	533.6
165°	579.1	579.1	580.2	576.0	571.9	566.7	559.5	553.2	545.0	536.7	529.4
167.5°	561.5	561.5	562.6	559.5	557.4	553.2	549.1	543.9	536.7	530.4	525.3
170°	546.0	546.0	547.0	545.0	543.9	541.8	537.7	534.6	529.4	524.2	521.1
172.5°	531.5	532.5	534.6	532.5	532.5	531.5	528.4	526.3	522.2	519.1	518.0
175°	521.1	522.2	523.2	522.2	522.2	522.2	520.1	519.1	517.0	514.9	514.9
177.5°	513.9	513.9	515.9	514.9	515.9	515.9	514.9	513.9	512.8	511.8	512.8
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	936.4	934.0	925.1	916.1	906.0	895.8	888.3	880.8	869.6	858.4	849.3
5°	1014.9	1003.5	984.6	965.7	940.1	914.5	897.2	880.0	856.8	833.7	815.2
7.5°	1077.0	1057.5	1031.1	1004.7	971.2	937.7	906.0	874.3	838.9	803.6	774.7
10°	1116.6	1103.4	1072.9	1042.5	997.6	952.7	908.4	864.1	818.6	773.1	734.9
12.5°	1120.5	1121.7	1093.7	1065.6	1014.9	964.1	910.2	856.4	799.1	741.8	697.4
15°	1086.6	1107.5	1092.0	1076.6	1025.4	974.2	908.0	841.8	775.8	709.7	658.4
17.5°	1023.6	1068.5	1070.7	1072.9	1021.8	970.6	897.2	823.9	749.2	674.4	620.4
20°	937.7	1003.9	1026.6	1049.4	1007.7	966.1	887.3	808.5	724.8	641.1	584.4
22.5°	849.9	930.3	972.0	1013.6	982.8	951.9	868.0	784.1	695.7	607.4	549.9
25°	750.0	837.7	901.7	965.7	946.8	927.9	845.2	762.6	668.5	574.5	515.8
27.5°	662.8	752.0	829.2	906.4	902.3	898.3	816.2	734.1	637.8	541.6	484.9
30°	585.2	668.3	754.6	841.0	850.9	860.9	781.7	702.4	605.9	509.5	454.8
32.5°	516.6	589.1	681.7	774.3	793.8	813.3	741.8	670.3	574.9	479.4	426.8
35°	460.3	526.1	618.7	711.4	735.7	760.1	698.0	635.8	542.8	449.7	399.6
37.5°	410.5	465.6	556.0	646.4	676.2	706.1	650.4	594.8	507.6	420.5	374.4
40°	369.3	413.6	496.7	579.7	614.3	648.8	602.9	557.0	474.3	391.6	349.2
42.5°	334.8	374.2	449.5	524.9	558.0	591.1	552.3	513.5	440.0	366.5	327.7
45°	305.3	336.8	405.3	473.7	505.2	536.7	503.4	470.0	405.3	340.5	304.3
47.5°	277.7	304.7	363.2	421.7	449.7	477.8	451.8	425.8	370.9	316.1	283.4
50°	252.9	274.6	325.8	377.0	401.4	425.8	402.8	379.9	334.8	289.7	261.2
52.5°	231.4	249.0	291.9	334.8	355.7	376.6	356.9	337.2	301.4	265.7	240.9
55°	210.0	225.1	262.2	299.4	313.6	327.9	312.6	297.4	268.5	239.7	218.8
57.5°	190.1	203.5	234.0	264.5	275.4	286.4	272.6	258.8	237.1	215.3	197.9
60°	170.6	181.6	207.0	232.4	239.1	245.8	234.6	223.4	208.2	193.0	177.3
62.5°	152.6	162.5	181.4	200.3	204.8	209.2	200.7	192.2	180.6	169.0	156.8
65°	133.9	141.4	156.8	172.3	175.1	177.9	170.4	162.9	154.2	145.4	136.5
67.5°	116.6	121.9	134.5	147.1	147.3	147.5	141.4	135.3	130.4	125.5	118.4
70°	99.7	104.8	113.1	121.5	121.7	121.9	117.0	112.1	108.5	104.8	99.5
72.5°	82.5	86.1	92.4	98.7	98.3	97.9	94.9	91.8	89.0	86.1	82.3
75°	66.8	69.9	74.1	78.4	77.2	76.0	74.3	72.7	70.3	67.8	65.4
77.5°	52.6	54.4	56.9	59.3	58.5	57.7	56.3	54.8	53.0	51.2	50.2
80°	38.6	39.4	41.0	42.7	42.3	41.8	40.2	38.6	38.2	37.8	36.4
82.5°	26.2	27.2	27.6	28.0	27.8	27.6	26.4	25.2	24.8	24.4	24.2
85°	15.6	15.8	16.0	16.3	15.6	15.0	14.6	14.2	14.2	14.2	14.0
87.5°	7.1	7.3	7.3	7.3	7.1	6.9	6.5	6.1	6.3	6.5	6.5
90°	19.7	16.6	13.5	11.4	9.3	6.2	4.1	2.1	4.1	6.2	9.3
92.5°	159.5	104.6	71.5	52.8	42.5	33.2	22.8	15.5	22.8	33.2	42.5
95°	377.1	222.7	134.7	94.3	67.3	49.7	38.3	35.2	38.3	49.7	67.3
97.5°	419.6	240.4	153.3	108.8	81.8	66.3	57.0	55.9	57.0	66.3	81.8
100°	390.6	237.3	164.7	124.3	99.5	85.0	77.7	76.7	77.7	85.0	99.5
102.5°	365.7	241.4	178.2	141.9	120.2	106.7	100.5	98.4	100.5	106.7	120.2
105°	356.4	249.7	193.7	161.6	141.9	129.5	123.3	120.2	123.3	129.5	141.9
107.5°	354.3	263.2	213.4	183.4	164.7	152.3	146.1	143.0	146.1	152.3	164.7
110°	359.5	280.8	234.1	205.1	187.5	176.1	170.9	167.8	170.9	176.1	187.5



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	369.9	298.4	255.9	227.9	210.3	198.9	193.7	190.6	193.7	198.9	210.3
115°	381.3	318.1	278.7	250.7	233.1	222.7	216.5	212.4	216.5	222.7	233.1
117.5°	395.8	338.8	299.4	273.5	253.8	244.5	239.3	234.1	239.3	244.5	253.8
120°	412.3	358.5	321.2	295.3	275.6	265.2	260.0	256.9	260.0	265.2	275.6
122.5°	427.9	379.2	342.9	315.0	296.3	284.9	279.7	276.6	279.7	284.9	296.3
125°	444.5	398.9	362.6	334.6	315.0	303.6	297.3	295.3	297.3	303.6	315.0
127.5°	457.9	416.5	381.3	353.3	331.5	320.1	312.9	309.8	312.9	320.1	331.5
130°	471.4	432.0	397.8	369.9	348.1	335.7	326.3	323.2	326.3	335.7	348.1
132.5°	483.8	445.5	412.3	385.4	363.6	348.1	337.7	333.6	337.7	348.1	363.6
135°	494.2	459.0	426.8	398.9	377.1	361.6	350.2	346.0	350.2	361.6	377.1
137.5°	502.5	468.3	437.2	411.3	389.5	373.0	361.6	357.4	361.6	373.0	389.5
140°	508.7	477.6	447.6	421.7	400.9	384.4	374.0	368.8	374.0	384.4	400.9
142.5°	514.9	484.9	455.9	432.0	411.3	396.8	385.4	381.3	385.4	396.8	411.3
145°	519.1	491.1	464.1	440.3	422.7	407.2	397.8	394.7	397.8	407.2	422.7
147.5°	522.2	496.3	471.4	450.7	433.1	419.6	410.3	408.2	410.3	419.6	433.1
150°	523.2	501.4	477.6	459.0	444.5	431.0	422.7	421.7	422.7	431.0	444.5
152.5°	525.3	504.5	484.9	467.3	454.8	443.4	435.1	435.1	435.1	443.4	454.8
155°	525.3	508.7	491.1	476.6	465.2	454.8	448.6	448.6	448.6	454.8	465.2
157.5°	526.3	510.8	496.3	484.9	474.5	465.2	460.0	459.0	460.0	465.2	474.5
160°	526.3	513.9	501.4	491.1	483.8	475.5	471.4	471.4	471.4	475.5	483.8
162.5°	525.3	514.9	504.5	496.3	490.0	483.8	480.7	480.7	480.7	483.8	490.0
165°	523.2	515.9	507.7	500.4	496.3	491.1	489.0	490.0	489.0	491.1	496.3
167.5°	522.2	515.9	509.7	504.5	501.4	497.3	496.3	497.3	496.3	497.3	501.4
170°	519.1	514.9	509.7	507.7	505.6	502.5	501.4	503.5	501.4	502.5	505.6
172.5°	518.0	514.9	510.8	509.7	508.7	506.6	506.6	507.7	506.6	506.6	508.7
175°	515.9	513.9	511.8	510.8	510.8	508.7	509.7	510.8	509.7	508.7	510.8
177.5°	514.9	512.8	511.8	511.8	511.8	510.8	511.8	512.8	511.8	510.8	511.8
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5	875.5
2.5°	840.2	832.2	824.3	818.2	812.1	801.8	791.4	789.0	786.5	783.1	779.6
5°	796.7	777.2	757.7	740.2	722.7	709.1	695.5	686.6	677.7	671.2	664.7
7.5°	745.9	716.7	687.4	666.7	646.0	626.3	606.6	600.3	594.0	585.4	576.9
10°	696.7	664.4	632.2	605.1	578.1	558.8	539.5	531.8	524.1	513.3	502.6
12.5°	652.9	617.5	582.2	555.0	527.7	509.1	490.4	479.2	468.0	461.9	455.8
15°	607.0	569.2	531.4	506.2	481.0	464.2	447.3	437.5	427.8	421.9	416.0
17.5°	566.3	529.0	491.6	467.4	443.2	427.8	412.4	403.8	395.3	390.8	386.4
20°	527.7	491.2	454.6	431.0	407.5	394.9	382.3	376.8	371.3	367.7	364.0
22.5°	492.4	456.4	420.5	400.4	380.3	370.1	360.0	356.1	352.2	349.2	346.1
25°	457.0	425.0	392.9	375.8	358.7	350.4	342.1	338.2	334.4	331.3	328.3
27.5°	428.2	397.5	366.9	352.2	337.6	331.1	324.6	321.6	318.5	315.7	312.8
30°	400.2	372.7	345.3	332.7	320.1	314.2	308.4	305.3	302.3	299.6	297.0
32.5°	374.2	350.6	327.0	315.5	303.9	299.0	294.1	290.5	286.8	284.8	282.8
35°	349.4	328.3	307.1	297.6	288.0	283.2	278.3	275.2	272.2	270.6	268.9
37.5°	328.3	309.4	290.5	281.3	272.2	267.5	262.9	260.2	257.6	257.0	256.4
40°	306.7	290.5	274.2	265.3	256.4	252.3	248.2	246.6	245.0	244.6	244.2
42.5°	288.9	273.0	257.2	249.0	240.9	237.5	234.0	233.2	232.4	233.0	233.6
45°	268.1	254.9	241.7	234.2	226.7	223.9	221.0	220.4	219.8	221.0	222.2
47.5°	250.7	238.5	226.3	219.2	212.1	210.0	208.0	207.8	207.6	209.2	210.9
50°	232.8	221.0	209.2	203.5	197.9	196.0	194.2	194.8	195.4	198.1	200.7
52.5°	216.1	205.2	194.2	188.9	183.6	182.4	181.2	182.6	184.0	186.9	189.7
55°	197.9	187.9	177.9	173.9	169.8	168.6	167.4	170.2	173.1	175.7	178.4
57.5°	180.4	171.6	162.9	159.3	155.6	155.4	155.2	157.8	160.5	163.3	166.2
60°	161.7	154.4	147.1	144.2	141.4	141.8	142.2	145.2	148.3	150.5	152.8
62.5°	144.6	138.5	132.4	129.8	127.2	128.2	129.2	132.2	135.3	137.9	140.6
65°	127.6	122.5	117.4	115.6	113.8	115.2	116.6	119.2	121.9	123.7	125.5
67.5°	111.3	107.1	102.8	101.4	99.9	101.4	102.8	105.4	108.1	109.9	111.7
70°	94.3	90.8	87.3	86.3	85.3	86.9	88.6	90.8	93.0	94.9	96.7
72.5°	78.4	75.8	73.1	72.9	72.7	74.1	75.6	77.8	80.0	81.3	82.5
75°	63.0	61.5	60.1	59.9	59.7	61.1	62.6	63.8	65.0	66.0	67.0
77.5°	49.2	47.9	46.7	46.9	47.1	48.1	49.2	50.4	51.6	52.2	52.8
80°	34.9	34.5	34.1	34.5	34.9	35.8	36.6	37.4	38.2	38.6	39.0
82.5°	24.0	23.6	23.2	23.8	24.4	25.0	25.6	26.2	26.8	27.0	27.2
85°	13.8	14.4	15.0	15.0	15.0	15.2	15.4	15.6	15.8	15.6	15.4
87.5°	6.5	6.7	6.9	6.9	6.9	7.1	7.3	7.3	7.3	7.1	6.9
90°	11.4	13.5	16.6	19.7	22.8	25.9	24.9	25.9	26.9	28.0	30.0
92.5°	52.8	71.5	104.6	159.5	213.4	192.7	144.0	102.6	79.8	69.4	62.2
95°	94.3	134.7	222.7	377.1	547.0	614.4	498.3	373.0	252.8	197.9	160.6
97.5°	108.8	153.3	240.4	419.6	705.5	944.9	977.0	856.8	646.5	509.7	391.6
100°	124.3	164.7	237.3	390.6	663.1	981.1	1185.2	1221.5	1137.6	1016.3	869.2
102.5°	141.9	178.2	241.4	365.7	600.9	913.8	1195.6	1342.7	1360.3	1302.3	1222.5
105°	161.6	193.7	249.7	356.4	552.2	833.0	1130.3	1346.8	1450.4	1470.1	1443.2
107.5°	183.4	213.4	263.2	354.3	517.0	761.5	1037.1	1284.7	1447.3	1528.1	1556.1
110°	205.1	234.1	280.8	359.5	498.3	702.4	950.0	1187.3	1377.9	1508.5	1581.0



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	227.9	255.9	298.4	369.9	488.0	663.1	874.4	1090.9	1286.8	1437.0	1535.4
115°	250.7	278.7	318.1	381.3	486.9	637.2	816.4	1008.1	1188.3	1340.6	1453.6
117.5°	273.5	299.4	338.8	395.8	488.0	619.5	778.1	943.8	1103.4	1243.2	1360.3
120°	295.3	321.2	358.5	412.3	492.1	608.2	749.1	895.1	1035.0	1159.3	1264.0
122.5°	315.0	342.9	379.2	427.9	499.4	600.9	725.2	856.8	980.1	1093.0	1188.3
125°	334.6	362.6	398.9	444.5	506.6	594.7	705.5	823.6	936.6	1036.0	1118.9
127.5°	353.3	381.3	416.5	457.9	514.9	591.6	686.9	793.6	896.2	987.3	1064.0
130°	369.9	397.8	432.0	471.4	523.2	588.5	672.4	765.6	858.9	942.8	1013.2
132.5°	385.4	412.3	445.5	483.8	529.4	587.4	658.9	739.7	823.6	900.3	966.6
135°	398.9	426.8	459.0	494.2	535.6	586.4	647.5	716.9	790.5	857.8	916.9
137.5°	411.3	437.2	468.3	502.5	539.8	584.3	637.2	695.2	757.3	817.4	870.3
140°	421.7	447.6	477.6	508.7	543.9	583.3	627.8	676.5	729.4	779.1	823.6
142.5°	432.0	455.9	484.9	514.9	547.0	581.2	619.5	658.9	702.4	743.9	781.2
145°	440.3	464.1	491.1	519.1	548.1	579.1	612.3	645.4	679.6	712.8	742.8
147.5°	450.7	471.4	496.3	522.2	548.1	576.0	605.0	634.1	662.0	690.0	711.8
150°	459.0	477.6	501.4	523.2	548.1	571.9	597.8	621.6	645.4	667.2	686.9
152.5°	467.3	484.9	504.5	525.3	545.0	566.7	589.5	610.2	629.9	648.6	664.1
155°	476.6	491.1	508.7	525.3	542.9	560.5	581.2	598.8	615.4	630.9	643.4
157.5°	484.9	496.3	510.8	526.3	539.8	555.3	571.9	586.4	600.9	613.3	623.7
160°	491.1	501.4	513.9	526.3	537.7	549.1	562.6	576.0	587.4	597.8	605.0
162.5°	496.3	504.5	514.9	525.3	533.6	542.9	553.2	563.6	572.9	582.2	588.5
165°	500.4	507.7	515.9	523.2	529.4	536.7	545.0	553.2	559.5	566.7	571.9
167.5°	504.5	509.7	515.9	522.2	525.3	530.4	536.7	543.9	549.1	553.2	557.4
170°	507.7	509.7	514.9	519.1	521.1	524.2	529.4	534.6	537.7	541.8	543.9
172.5°	509.7	510.8	514.9	518.0	518.0	519.1	522.2	526.3	528.4	531.5	532.5
175°	510.8	511.8	513.9	515.9	514.9	514.9	517.0	519.1	520.1	522.2	522.2
177.5°	511.8	511.8	512.8	514.9	512.8	511.8	512.8	513.9	514.9	515.9	515.9
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	875.5	875.5	875.5	875.5
2.5°	778.2	776.8	771.1	765.4
5°	659.8	654.9	653.3	651.7
7.5°	576.5	576.1	567.6	559.0
10°	503.2	503.8	496.1	488.3
12.5°	450.8	445.7	445.1	444.5
15°	411.3	406.7	405.9	405.0
17.5°	383.5	380.7	379.9	379.0
20°	362.4	360.8	359.3	357.9
22.5°	344.1	342.1	340.9	339.6
25°	326.4	324.6	324.2	323.8
27.5°	310.6	308.4	308.4	308.4
30°	295.6	294.1	293.5	292.9
32.5°	281.5	280.3	280.3	280.3
35°	268.3	267.7	266.9	266.1
37.5°	256.4	256.4	255.9	255.5
40°	244.8	245.4	245.4	245.4
42.5°	234.2	234.8	234.8	234.8
45°	223.2	224.3	224.7	225.1
47.5°	212.5	214.1	214.5	214.9
50°	201.9	203.1	203.3	203.5
52.5°	191.1	192.6	193.6	194.6
55°	179.8	181.2	181.8	182.4
57.5°	167.6	169.0	169.2	169.4
60°	154.2	155.6	156.0	156.4
62.5°	141.4	142.2	142.6	143.0
65°	126.8	128.0	128.8	129.6
67.5°	112.7	113.8	113.8	113.8
70°	97.1	97.5	98.1	98.7
72.5°	82.7	82.9	82.9	82.9
75°	67.4	67.8	68.0	68.3
77.5°	53.0	53.2	53.2	53.2
80°	38.8	38.6	38.6	38.6
82.5°	26.6	26.0	26.0	26.0
85°	15.2	15.0	15.2	15.4
87.5°	6.9	6.9	6.9	6.9
90°	29.0	30.0	31.1	30.0
92.5°	60.1	55.9	57.0	54.9
95°	140.9	131.6	124.3	120.2
97.5°	322.2	282.8	258.0	246.6
100°	764.6	689.0	648.6	649.6
102.5°	1146.9	1090.9	1058.8	1028.8
105°	1395.5	1356.2	1323.0	1317.8
107.5°	1549.9	1531.3	1517.8	1506.4
110°	1610.0	1618.3	1616.2	1614.1



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1594.5	1624.5	1634.9	1635.9
115°	1531.3	1576.8	1597.6	1602.7
117.5°	1441.1	1491.9	1523.0	1530.2
120°	1345.8	1403.8	1428.7	1434.9
122.5°	1258.8	1309.5	1337.5	1345.8
125°	1185.2	1230.8	1256.7	1264.0
127.5°	1124.1	1163.5	1187.3	1193.5
130°	1068.1	1105.4	1127.2	1135.5
132.5°	1017.4	1054.7	1073.3	1078.5
135°	967.7	998.7	1017.4	1024.6
137.5°	913.8	945.9	961.4	967.7
140°	863.0	892.0	908.6	907.6
142.5°	813.3	838.1	852.7	851.6
145°	768.7	790.5	798.8	800.9
147.5°	732.5	748.0	756.3	757.3
150°	702.4	713.8	720.0	720.0
152.5°	675.5	685.9	689.0	689.0
155°	652.7	661.0	663.1	664.1
157.5°	632.0	638.2	640.3	640.3
160°	612.3	618.5	618.5	617.5
162.5°	592.6	597.8	597.8	596.8
165°	576.0	580.2	579.1	579.1
167.5°	559.5	562.6	561.5	561.5
170°	545.0	547.0	546.0	546.0
172.5°	532.5	534.6	532.5	531.5
175°	522.2	523.2	522.2	521.1
177.5°	514.9	515.9	513.9	513.9
180°	511.8	511.8	511.8	511.8



TEST NUMBER: P831365

CATALOG NUMBER: S123DIP-S340D1195U940-4F0-1E-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	8.67	9.34	9.81	10.46	12.03	10.90	11.57	12.04	12.70	14.27
	3H	10.30	10.90	11.45	12.03	13.62	12.31	12.91	13.46	14.05	15.63
	4H	10.87	11.44	12.02	12.57	14.16	12.76	13.32	13.91	14.46	16.05
	6H	11.23	11.75	12.39	12.89	14.49	13.02	13.54	14.18	14.68	16.28
	8H	11.32	11.82	12.49	12.97	14.56	13.08	13.58	14.24	14.73	16.32
	12H	11.36	11.83	12.53	12.98	14.59	13.09	13.56	14.26	14.71	16.32
4H	2H	9.22	9.79	10.38	10.92	12.51	11.04	11.61	12.21	12.75	14.34
	3H	11.03	11.51	12.20	12.67	14.27	12.65	13.12	13.81	14.28	15.88
	4H	11.72	12.16	12.89	13.31	14.93	13.22	13.66	14.39	14.81	16.43
	6H	12.19	12.56	13.36	13.73	15.34	13.62	13.99	14.79	15.16	16.77
	8H	12.32	12.67	13.49	13.83	15.46	13.72	14.07	14.90	15.23	16.86
	12H	12.38	12.69	13.57	13.87	15.50	13.76	14.08	14.95	15.25	16.88
8H	4H	11.97	12.32	13.15	13.48	15.11	13.31	13.66	14.49	14.82	16.45
	6H	12.55	12.84	13.75	14.05	15.67	13.81	14.10	15.00	15.30	16.93
	8H	12.76	13.01	13.96	14.19	15.84	13.99	14.24	15.19	15.42	17.07
	12H	12.88	13.10	14.08	14.28	15.95	14.08	14.30	15.28	15.48	17.16
12H	4H	11.97	12.28	13.15	13.45	15.09	13.28	13.60	14.47	14.77	16.40
	6H	12.60	12.85	13.80	14.04	15.68	13.82	14.07	15.02	15.25	16.90
	8H	12.83	13.05	14.03	14.23	15.91	14.01	14.23	15.21	15.41	17.09