

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: P831389

Luminaire Tested: S123DIP-S340D365U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831389
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-S340D365U935-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

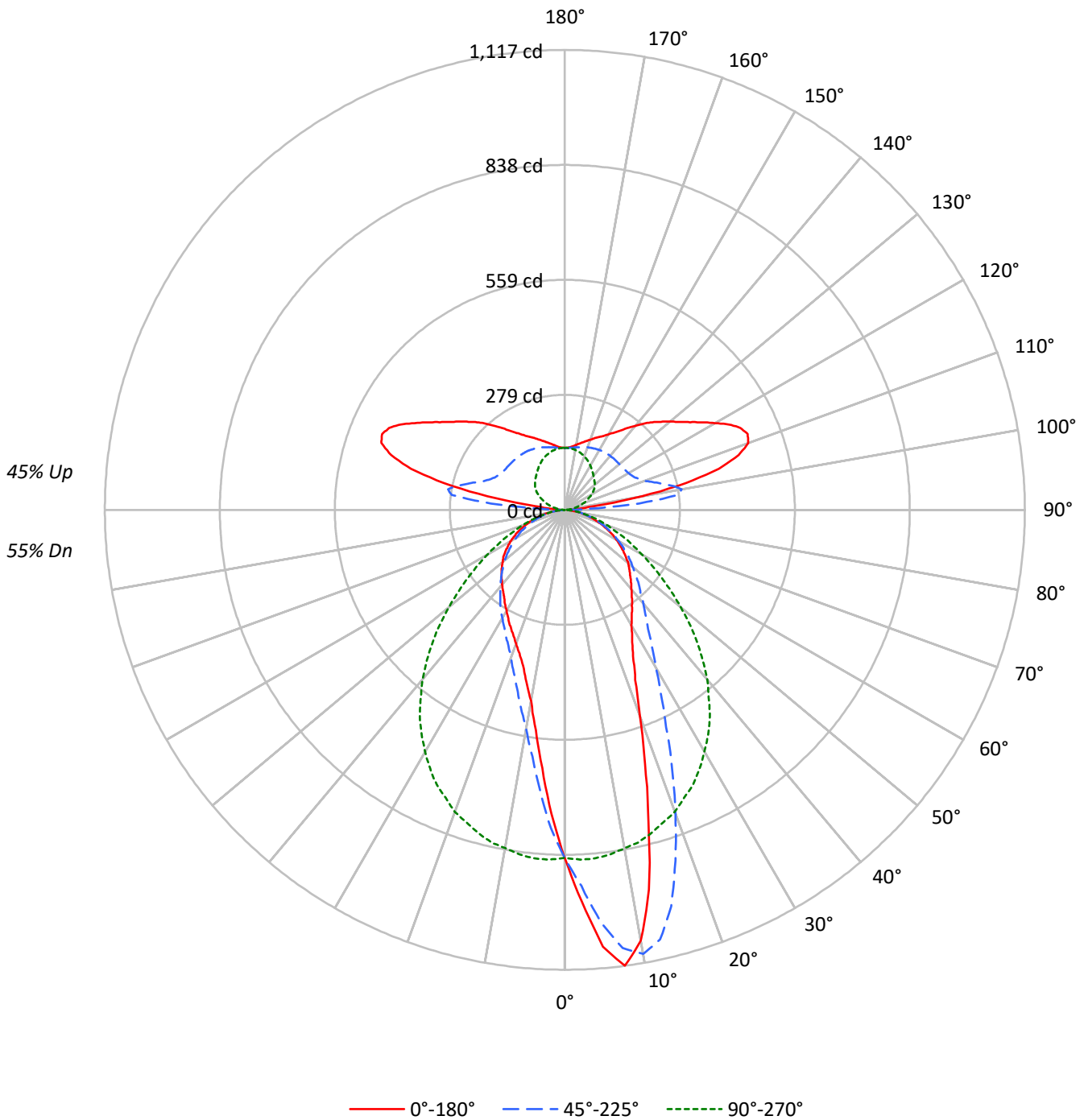
Lumens per Lamp: N/A
Luminaire Lumens: 2490.4 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 22.4
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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60	55				
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	54	53	52	47				
2	91	84	78	73	84	78	73	69	67	64	60	58	55	52	48	47	45	40				
3	83	74	67	62	77	69	63	58	60	55	52	52	48	45	44	41	39	35				
4	77	66	59	53	71	62	55	50	54	49	45	46	43	39	39	37	34	31				
5	71	60	52	46	66	56	49	44	49	43	39	42	38	35	36	33	30	27				
6	66	54	46	40	61	51	44	38	44	39	35	38	34	31	33	30	27	24				
7	61	49	41	36	57	46	39	34	40	35	31	35	31	28	30	27	25	22				
8	57	45	37	32	53	42	35	31	37	32	28	33	28	25	28	25	22	20				
9	53	41	34	29	49	39	32	28	34	29	25	30	26	23	26	23	20	18				
10	50	38	31	26	46	36	29	25	32	27	23	28	24	21	25	21	19	17				

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	3.2
10°-20°	198.8	8.0
20°-30°	235.4	9.5
30°-40°	236.7	9.5
40°-50°	217.2	8.7
50°-60°	179.2	7.2
60°-70°	126.8	5.1
70°-80°	67.7	2.7
80°-90°	18.0	0.7
90°-100°	81.6	3.3
100°-110°	238.8	9.6
110°-120°	233.2	9.4
120°-130°	185.7	7.5
130°-140°	146.5	5.9
140°-150°	109.3	4.4
150°-160°	76.2	3.1
160°-170°	44.8	1.8
170°-180°	14.6	0.6
0°-30°	514.2	20.6
0°-40°	750.9	30.2
0°-60°	1147.3	46.1
0°-90°	1359.7	54.6
90°-120°	553.5	22.2
90°-150°	995.1	40.0
90°-180°	1131.0	45.4
0°-180°	2490.4	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°	9	8	1	8	9	5
95°	35	180	10	180	35	57
105°	387	245	35	245	387	386
115°	471	187	62	187	471	459
125°	371	175	87	175	371	336
135°	301	172	102	172	301	233
145°	235	170	116	170	235	149
155°	195	165	132	165	195	91
165°	170	158	144	158	170	49
175°	153	151	150	151	153	15
180°	150	150	150	150	150	



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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°	8.8	9.1	8.8	8.5	8.8	8.2	7.9	7.6	7.3	7.6	6.7
92.5°	16.1	16.7	16.4	17.6	18.3	20.4	23.4	30.1	42.3	56.6	62.7
95°	35.3	36.5	38.6	41.4	47.2	58.1	74.2	109.5	146.3	180.4	160.6
97.5°	72.4	75.8	83.1	94.6	115.0	149.7	189.9	251.6	286.9	277.5	207.2
100°	190.8	190.5	202.3	224.5	255.3	298.5	334.1	358.7	348.1	288.1	194.7
102.5°	302.1	311.0	320.4	336.8	359.0	382.5	399.5	394.3	351.1	268.4	176.5
105°	387.0	388.5	398.3	409.8	423.8	431.7	426.0	395.5	331.9	244.6	162.2
107.5°	442.4	445.7	449.7	455.2	457.0	448.8	425.1	377.3	304.6	223.6	151.8
110°	474.0	474.6	475.3	472.8	464.3	443.0	404.7	348.7	279.0	206.3	146.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	480.4	480.1	477.1	468.3	450.9	422.0	377.9	320.4	256.8	194.7	143.3
115°	470.7	469.2	463.1	449.7	426.9	393.7	349.0	296.0	239.8	187.1	143.0
117.5°	449.4	447.3	438.1	423.2	399.5	365.1	324.0	277.2	228.5	181.9	143.3
120°	421.4	419.6	412.3	395.2	371.2	340.5	304.0	262.9	220.0	178.6	144.5
122.5°	395.2	392.8	384.6	369.7	349.0	321.0	287.8	251.6	213.0	176.5	146.7
125°	371.2	369.1	361.5	348.1	328.6	304.3	275.1	241.9	207.2	174.6	148.8
127.5°	350.5	348.7	341.7	330.1	312.5	290.0	263.2	233.1	201.7	173.7	151.2
130°	333.5	331.0	324.6	313.7	297.6	276.9	252.2	224.8	197.5	172.8	153.7
132.5°	316.7	315.2	309.7	298.8	283.9	264.4	241.9	217.2	193.5	172.5	155.5
135°	300.9	298.8	293.3	284.2	269.3	251.9	232.2	210.5	190.2	172.2	157.3
137.5°	284.2	282.4	277.8	268.4	255.6	240.1	222.4	204.2	187.1	171.6	158.5
140°	266.5	266.8	262.0	253.4	241.9	228.8	214.2	198.7	184.4	171.3	159.7
142.5°	250.1	250.4	246.1	238.8	229.4	218.5	206.3	193.5	181.9	170.7	160.6
145°	235.2	234.6	232.2	225.8	218.2	209.3	199.6	189.6	179.8	170.1	161.0
147.5°	222.4	222.1	219.7	215.1	209.0	202.6	194.4	186.2	177.7	169.2	161.0
150°	211.5	211.5	209.6	206.3	201.7	195.9	189.6	182.6	175.6	168.0	161.0
152.5°	202.3	202.3	201.4	198.4	195.0	190.5	185.0	179.2	173.1	166.4	160.0
155°	195.0	194.7	194.1	191.7	188.9	185.3	180.7	175.9	170.7	164.6	159.4
157.5°	188.0	188.0	187.4	185.6	183.2	180.1	176.5	172.2	168.0	163.1	158.5
160°	181.3	181.6	181.6	179.8	177.7	175.6	172.5	169.2	165.2	161.3	157.9
162.5°	175.3	175.6	175.6	174.0	172.8	171.0	168.3	165.5	162.5	159.4	156.7
165°	170.1	170.1	170.4	169.2	168.0	166.4	164.3	162.5	160.0	157.6	155.5
167.5°	164.9	164.9	165.2	164.3	163.7	162.5	161.3	159.7	157.6	155.8	154.3
170°	160.3	160.3	160.6	160.0	159.7	159.1	157.9	157.0	155.5	154.0	153.0
172.5°	156.1	156.4	157.0	156.4	156.4	156.1	155.2	154.6	153.3	152.4	152.1
175°	153.0	153.3	153.7	153.3	153.3	153.3	152.7	152.4	151.8	151.2	151.2
177.5°	150.9	150.9	151.5	151.2	151.5	151.5	151.2	150.9	150.6	150.3	150.6
180°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3



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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°	5.8	4.9	4.0	3.3	2.7	1.8	1.2	0.6	1.2	1.8	2.7
92.5°	46.9	30.7	21.0	15.5	12.5	9.7	6.7	4.6	6.7	9.7	12.5
95°	110.8	65.4	39.6	27.7	19.8	14.6	11.3	10.3	11.3	14.6	19.8
97.5°	123.2	70.6	45.0	31.9	24.0	19.5	16.7	16.4	16.7	19.5	24.0
100°	114.7	69.7	48.4	36.5	29.2	24.9	22.8	22.5	22.8	24.9	29.2
102.5°	107.4	70.9	52.3	41.7	35.3	31.3	29.5	28.9	29.5	31.3	35.3
105°	104.7	73.3	56.9	47.5	41.7	38.0	36.2	35.3	36.2	38.0	41.7
107.5°	104.1	77.3	62.7	53.9	48.4	44.7	42.9	42.0	42.9	44.7	48.4
110°	105.6	82.5	68.8	60.2	55.1	51.7	50.2	49.3	50.2	51.7	55.1



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	108.6	87.6	75.2	66.9	61.8	58.4	56.9	56.0	56.9	58.4	61.8
115°	112.0	93.4	81.8	73.6	68.5	65.4	63.6	62.4	63.6	65.4	68.5
117.5°	116.2	99.5	87.9	80.3	74.5	71.8	70.3	68.8	70.3	71.8	74.5
120°	121.1	105.3	94.3	86.7	80.9	77.9	76.4	75.5	76.4	77.9	80.9
122.5°	125.7	111.4	100.7	92.5	87.0	83.7	82.2	81.2	82.2	83.7	87.0
125°	130.5	117.1	106.5	98.3	92.5	89.1	87.3	86.7	87.3	89.1	92.5
127.5°	134.5	122.3	112.0	103.8	97.4	94.0	91.9	91.0	91.9	94.0	97.4
130°	138.4	126.9	116.8	108.6	102.2	98.6	95.8	94.9	95.8	98.6	102.2
132.5°	142.1	130.8	121.1	113.2	106.8	102.2	99.2	98.0	99.2	102.2	106.8
135°	145.1	134.8	125.4	117.1	110.8	106.2	102.8	101.6	102.8	106.2	110.8
137.5°	147.6	137.5	128.4	120.8	114.4	109.5	106.2	105.0	106.2	109.5	114.4
140°	149.4	140.3	131.4	123.8	117.7	112.9	109.8	108.3	109.8	112.9	117.7
142.5°	151.2	142.4	133.9	126.9	120.8	116.5	113.2	112.0	113.2	116.5	120.8
145°	152.4	144.2	136.3	129.3	124.1	119.6	116.8	115.9	116.8	119.6	124.1
147.5°	153.3	145.7	138.4	132.4	127.2	123.2	120.5	119.9	120.5	123.2	127.2
150°	153.7	147.3	140.3	134.8	130.5	126.6	124.1	123.8	124.1	126.6	130.5
152.5°	154.3	148.2	142.4	137.2	133.6	130.2	127.8	127.8	127.8	130.2	133.6
155°	154.3	149.4	144.2	140.0	136.6	133.6	131.7	131.7	131.7	133.6	136.6
157.5°	154.6	150.0	145.7	142.4	139.4	136.6	135.1	134.8	135.1	136.6	139.4
160°	154.6	150.9	147.3	144.2	142.1	139.7	138.4	138.4	138.4	139.7	142.1
162.5°	154.3	151.2	148.2	145.7	143.9	142.1	141.2	141.2	141.2	142.1	143.9
165°	153.7	151.5	149.1	147.0	145.7	144.2	143.6	143.9	143.6	144.2	145.7
167.5°	153.3	151.5	149.7	148.2	147.3	146.0	145.7	146.0	145.7	146.0	147.3
170°	152.4	151.2	149.7	149.1	148.5	147.6	147.3	147.9	147.3	147.6	148.5
172.5°	152.1	151.2	150.0	149.7	149.4	148.8	148.8	149.1	148.8	148.8	149.4
175°	151.5	150.9	150.3	150.0	150.0	149.4	149.7	150.0	149.7	149.4	150.0
177.5°	151.2	150.6	150.3	150.3	150.3	150.0	150.3	150.6	150.3	150.0	150.3
180°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-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°	3.3	4.0	4.9	5.8	6.7	7.6	7.3	7.6	7.9	8.2	8.8
92.5°	15.5	21.0	30.7	46.9	62.7	56.6	42.3	30.1	23.4	20.4	18.3
95°	27.7	39.6	65.4	110.8	160.6	180.4	146.3	109.5	74.2	58.1	47.2
97.5°	31.9	45.0	70.6	123.2	207.2	277.5	286.9	251.6	189.9	149.7	115.0
100°	36.5	48.4	69.7	114.7	194.7	288.1	348.1	358.7	334.1	298.5	255.3
102.5°	41.7	52.3	70.9	107.4	176.5	268.4	351.1	394.3	399.5	382.5	359.0
105°	47.5	56.9	73.3	104.7	162.2	244.6	331.9	395.5	426.0	431.7	423.8
107.5°	53.9	62.7	77.3	104.1	151.8	223.6	304.6	377.3	425.1	448.8	457.0
110°	60.2	68.8	82.5	105.6	146.3	206.3	279.0	348.7	404.7	443.0	464.3



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	66.9	75.2	87.6	108.6	143.3	194.7	256.8	320.4	377.9	422.0	450.9
115°	73.6	81.8	93.4	112.0	143.0	187.1	239.8	296.0	349.0	393.7	426.9
117.5°	80.3	87.9	99.5	116.2	143.3	181.9	228.5	277.2	324.0	365.1	399.5
120°	86.7	94.3	105.3	121.1	144.5	178.6	220.0	262.9	304.0	340.5	371.2
122.5°	92.5	100.7	111.4	125.7	146.7	176.5	213.0	251.6	287.8	321.0	349.0
125°	98.3	106.5	117.1	130.5	148.8	174.6	207.2	241.9	275.1	304.3	328.6
127.5°	103.8	112.0	122.3	134.5	151.2	173.7	201.7	233.1	263.2	290.0	312.5
130°	108.6	116.8	126.9	138.4	153.7	172.8	197.5	224.8	252.2	276.9	297.6
132.5°	113.2	121.1	130.8	142.1	155.5	172.5	193.5	217.2	241.9	264.4	283.9
135°	117.1	125.4	134.8	145.1	157.3	172.2	190.2	210.5	232.2	251.9	269.3
137.5°	120.8	128.4	137.5	147.6	158.5	171.6	187.1	204.2	222.4	240.1	255.6
140°	123.8	131.4	140.3	149.4	159.7	171.3	184.4	198.7	214.2	228.8	241.9
142.5°	126.9	133.9	142.4	151.2	160.6	170.7	181.9	193.5	206.3	218.5	229.4
145°	129.3	136.3	144.2	152.4	161.0	170.1	179.8	189.6	199.6	209.3	218.2
147.5°	132.4	138.4	145.7	153.3	161.0	169.2	177.7	186.2	194.4	202.6	209.0
150°	134.8	140.3	147.3	153.7	161.0	168.0	175.6	182.6	189.6	195.9	201.7
152.5°	137.2	142.4	148.2	154.3	160.0	166.4	173.1	179.2	185.0	190.5	195.0
155°	140.0	144.2	149.4	154.3	159.4	164.6	170.7	175.9	180.7	185.3	188.9
157.5°	142.4	145.7	150.0	154.6	158.5	163.1	168.0	172.2	176.5	180.1	183.2
160°	144.2	147.3	150.9	154.6	157.9	161.3	165.2	169.2	172.5	175.6	177.7
162.5°	145.7	148.2	151.2	154.3	156.7	159.4	162.5	165.5	168.3	171.0	172.8
165°	147.0	149.1	151.5	153.7	155.5	157.6	160.0	162.5	164.3	166.4	168.0
167.5°	148.2	149.7	151.5	153.3	154.3	155.8	157.6	159.7	161.3	162.5	163.7
170°	149.1	149.7	151.2	152.4	153.0	154.0	155.5	157.0	157.9	159.1	159.7
172.5°	149.7	150.0	151.2	152.1	152.1	152.4	153.3	154.6	155.2	156.1	156.4
175°	150.0	150.3	150.9	151.5	151.2	151.2	151.8	152.4	152.7	153.3	153.3
177.5°	150.3	150.3	150.6	151.2	150.6	150.3	150.6	150.9	151.2	151.5	151.5
180°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-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°	8.5	8.8	9.1	8.8
92.5°	17.6	16.4	16.7	16.1
95°	41.4	38.6	36.5	35.3
97.5°	94.6	83.1	75.8	72.4
100°	224.5	202.3	190.5	190.8
102.5°	336.8	320.4	311.0	302.1
105°	409.8	398.3	388.5	387.0
107.5°	455.2	449.7	445.7	442.4
110°	472.8	475.3	474.6	474.0



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	468.3	477.1	480.1	480.4
115°	449.7	463.1	469.2	470.7
117.5°	423.2	438.1	447.3	449.4
120°	395.2	412.3	419.6	421.4
122.5°	369.7	384.6	392.8	395.2
125°	348.1	361.5	369.1	371.2
127.5°	330.1	341.7	348.7	350.5
130°	313.7	324.6	331.0	333.5
132.5°	298.8	309.7	315.2	316.7
135°	284.2	293.3	298.8	300.9
137.5°	268.4	277.8	282.4	284.2
140°	253.4	262.0	266.8	266.5
142.5°	238.8	246.1	250.4	250.1
145°	225.8	232.2	234.6	235.2
147.5°	215.1	219.7	222.1	222.4
150°	206.3	209.6	211.5	211.5
152.5°	198.4	201.4	202.3	202.3
155°	191.7	194.1	194.7	195.0
157.5°	185.6	187.4	188.0	188.0
160°	179.8	181.6	181.6	181.3
162.5°	174.0	175.6	175.6	175.3
165°	169.2	170.4	170.1	170.1
167.5°	164.3	165.2	164.9	164.9
170°	160.0	160.6	160.3	160.3
172.5°	156.4	157.0	156.4	156.1
175°	153.3	153.7	153.3	153.0
177.5°	151.2	151.5	150.9	150.9
180°	150.3	150.3	150.3	150.3



TEST NUMBER: P831389

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-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	11.66	12.52	12.59	13.46	14.67	13.90	14.76	14.82	15.70	16.90
	3H	13.31	14.08	14.24	15.03	16.26	15.32	16.09	16.26	17.04	18.27
	4H	13.88	14.62	14.84	15.57	16.81	15.77	16.50	16.72	17.45	18.69
	6H	14.26	14.93	15.22	15.89	17.14	16.05	16.72	17.01	17.68	18.93
	8H	14.35	14.99	15.32	15.97	17.22	16.11	16.75	17.08	17.72	18.97
	12H	14.40	15.01	15.37	15.97	17.25	16.13	16.74	17.10	17.71	18.98
4H	2H	12.24	12.97	13.19	13.92	15.16	14.06	14.79	15.02	15.74	16.98
	3H	14.06	14.67	15.03	15.65	16.91	15.68	16.29	16.64	17.27	18.52
	4H	14.76	15.32	15.74	16.29	17.57	16.26	16.82	17.24	17.79	19.07
	6H	15.24	15.72	16.22	16.71	17.99	16.67	17.15	17.66	18.14	19.42
	8H	15.38	15.82	16.36	16.81	18.10	16.78	17.23	17.77	18.22	19.51
	12H	15.44	15.84	16.45	16.85	18.15	16.82	17.23	17.83	18.24	19.53
8H	4H	15.03	15.47	16.02	16.47	17.76	16.37	16.82	17.36	17.81	19.10
	6H	15.62	15.99	16.63	17.02	18.31	16.87	17.24	17.89	18.27	19.56
	8H	15.83	16.15	16.85	17.17	18.48	17.05	17.38	18.07	18.40	19.71
	12H	15.95	16.23	16.97	17.25	18.60	17.15	17.44	18.18	18.45	19.81
12H	4H	15.03	15.43	16.04	16.44	17.74	16.34	16.75	17.35	17.75	19.05
	6H	15.67	15.99	16.69	17.01	18.32	16.89	17.21	17.91	18.23	19.54
	8H	15.90	16.19	16.93	17.20	18.56	17.09	17.37	18.11	18.39	19.74