

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: P831327

Luminaire Tested: S123DIP-S340D1025U927-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831327
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U927-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

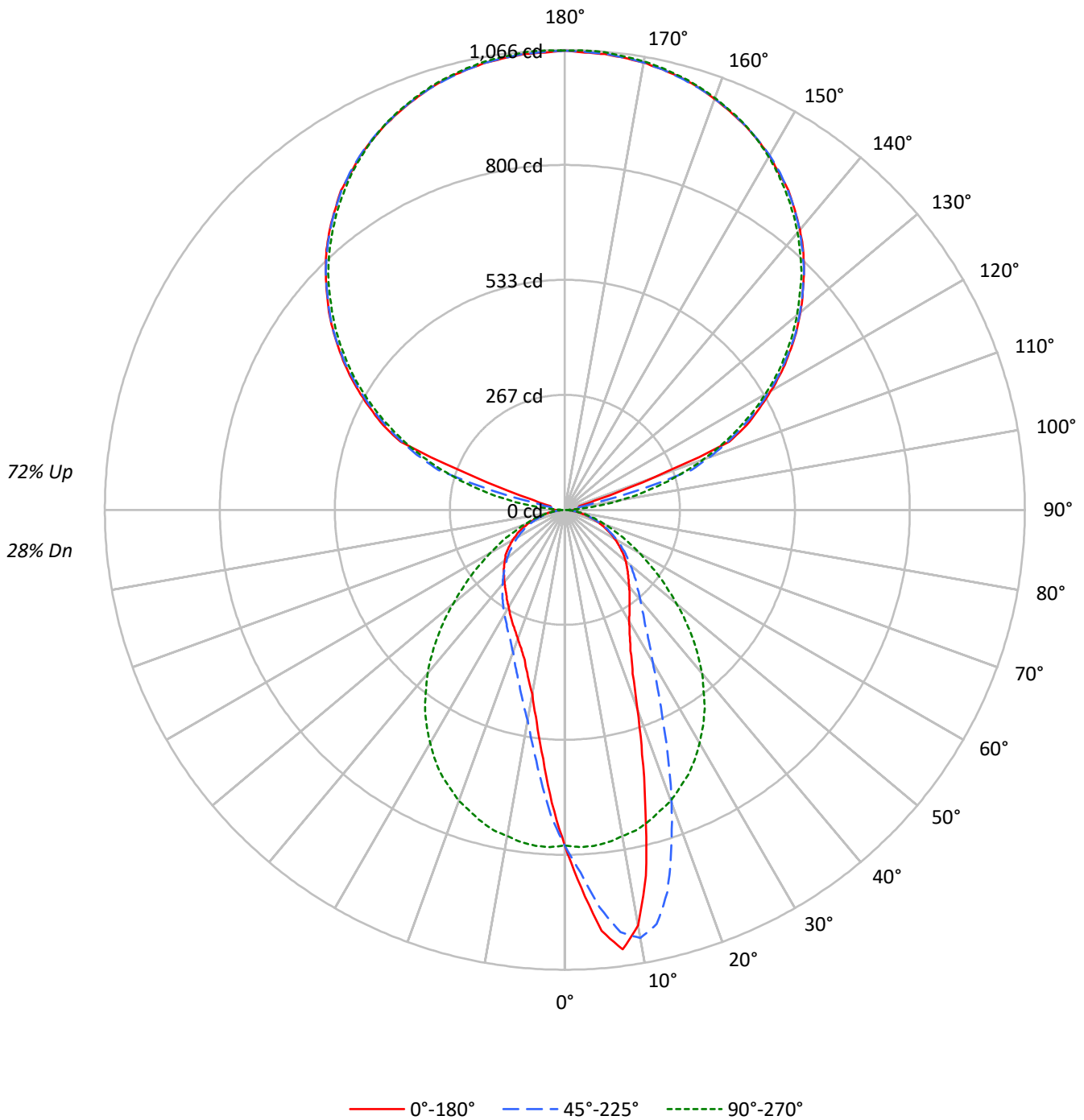
Lumens per Lamp: N/A
Luminaire Lumens: 4496.9 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	85	82	83	80	77	74	63	60	59	47	45	44	32	31	31	24				
2	85	78	72	67	76	70	65	61	55	52	49	41	39	37	29	27	26	21				
3	78	69	62	57	69	62	56	51	49	45	42	37	34	32	26	24	23	18				
4	71	61	54	48	63	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14				
6	60	49	41	36	54	44	38	33	35	31	27	27	24	21	19	17	16	12				
7	56	44	37	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11				
8	52	40	33	28	46	36	30	26	29	25	21	23	19	17	16	14	13	10				
9	48	37	30	25	43	33	27	23	27	22	19	21	18	15	15	13	12	9				
10	45	34	27	22	40	31	25	21	25	20	17	19	16	14	14	12	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	8372	8372	8372	8372	8372
5°	10588	9994	8447	6807	6255
10°	10691	11014	8391	5426	4741
15°	8052	10225	8333	4596	4009
20°	5611	8275	8227	4018	3643
25°	4278	6364	8045	3697	3417
30°	3701	5056	7756	3470	3234
35°	3434	4268	7422	3306	3106
40°	3250	3829	6953	3149	3063
45°	3142	3544	6357	3028	3043
50°	3088	3317	5652	2915	3028
55°	2973	3153	4958	2811	3042
60°	2868	2975	4273	2713	2992
65°	2692	2809	3685	2606	2932
70°	2486	2596	3135	2430	2760
75°	2250	2325	2687	2258	2520
80°	1860	2033	2126	1971	2126
85°	1470	1655	1556	1667	1692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 7258 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.5	1.6
10°-20°	182.9	4.1
20°-30°	216.6	4.8
30°-40°	217.8	4.8
40°-50°	199.8	4.4
50°-60°	164.9	3.7
60°-70°	116.7	2.6
70°-80°	62.3	1.4
80°-90°	17.9	0.4
90°-100°	37.5	0.8
100°-110°	181.4	4.0
110°-120°	444.6	9.9
120°-130°	564.5	12.6
130°-140°	603.0	13.4
140°-150°	563.9	12.5
150°-160°	454.8	10.1
160°-170°	293.5	6.5
170°-180°	101.2	2.2
0°-30°	473.1	10.5
0°-40°	690.8	15.4
0°-60°	1055.6	23.5
0°-90°	1252.4	27.9
90°-120°	663.5	14.8
90°-150°	2394.9	53.3
90°-180°	3244.0	72.1
0°-180°	4496.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	778	778	778	778	778	
5°	980	925	782	630	579	93
15°	723	918	748	412	360	200
25°	360	536	677	311	288	170
35°	261	325	565	252	236	164
45°	206	233	418	199	200	160
55°	158	168	264	150	162	142
65°	106	110	145	102	115	105
75°	54	56	65	54	61	57
85°	12	13	13	14	14	13
90°	24	19	1	19	24	11
95°	30	24	48	24	30	25
105°	35	173	236	173	35	72
115°	465	454	442	454	465	437
125°	636	633	623	633	636	568
135°	784	784	776	784	784	604
145°	904	902	895	902	904	564
155°	984	985	986	985	984	454
165°	1037	1037	1040	1037	1037	293
175°	1060	1061	1064	1061	1060	101
180°	1064	1064	1064	1064	1064	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	876.7	875.8	874.9	870.4	865.8	863.7	861.5	855.0	848.5	841.3	834.1
5°	979.9	982.4	985.0	982.1	979.2	970.3	961.5	949.8	938.0	924.9	911.7
7.5°	1027.5	1029.0	1030.4	1028.6	1026.8	1024.5	1022.1	1011.7	1001.2	987.7	974.1
10°	978.1	981.3	984.6	991.6	998.7	1006.6	1014.5	1013.1	1011.7	1007.7	1003.7
12.5°	869.5	873.4	877.4	891.5	905.5	923.6	941.6	957.2	972.7	983.5	994.3
15°	722.6	733.6	744.6	757.4	770.2	796.7	823.3	855.9	888.6	917.6	946.7
17.5°	595.2	599.3	603.5	617.2	630.9	664.3	697.7	735.4	773.1	821.3	869.5
20°	489.8	493.6	497.3	515.4	533.4	559.6	585.8	628.2	670.6	722.4	774.2
22.5°	411.4	417.4	423.4	433.5	443.6	468.7	493.7	531.5	569.2	626.4	683.6
25°	360.2	364.5	368.9	375.0	381.1	401.2	421.2	452.2	483.3	535.8	588.3
27.5°	325.2	327.0	328.8	334.9	341.1	354.1	367.1	393.8	420.5	465.0	509.6
30°	297.8	299.0	300.3	305.7	311.1	320.0	328.8	348.1	367.4	406.8	446.1
32.5°	278.6	279.5	280.4	284.6	288.7	295.1	301.4	315.4	329.5	362.0	394.5
35°	261.3	261.8	262.4	265.5	268.5	273.2	277.9	288.6	299.2	324.8	350.5
37.5°	246.1	246.9	247.6	249.4	251.2	255.4	259.5	268.0	276.5	296.1	315.8
40°	231.3	232.6	233.9	235.1	236.4	239.8	243.3	249.8	256.3	272.5	288.7
42.5°	218.7	220.0	221.2	221.8	222.3	224.3	226.3	232.3	238.2	250.3	262.4
45°	206.4	207.0	207.5	208.1	208.6	210.2	211.9	217.1	222.3	232.8	243.3
47.5°	195.3	195.3	195.3	195.6	196.0	197.4	198.9	202.7	206.4	214.6	222.7
50°	184.4	184.4	184.4	183.9	183.3	184.2	185.2	188.0	190.9	198.1	205.4
52.5°	171.4	171.4	171.4	171.6	171.8	171.8	171.8	174.3	176.9	183.3	189.8
55°	158.4	159.2	159.9	159.3	158.8	159.2	159.5	161.2	162.8	168.0	173.2
57.5°	145.5	145.8	146.2	146.0	145.8	146.0	146.2	147.6	149.1	153.0	157.0
60°	133.2	133.2	133.2	132.8	132.5	132.8	133.2	133.9	134.6	138.2	141.8
62.5°	119.5	119.6	119.8	120.0	120.2	119.8	119.5	120.4	121.3	124.0	126.7
65°	105.7	105.9	106.1	106.7	107.2	106.8	106.5	107.4	108.3	110.3	112.2
67.5°	93.5	93.1	92.8	92.9	93.1	93.7	94.2	94.4	94.6	96.7	98.9
70°	79.0	79.4	79.8	79.6	79.4	79.6	79.8	80.3	80.8	82.5	84.1
72.5°	66.0	66.2	66.4	66.4	66.4	66.8	67.1	67.7	68.2	69.1	70.0
75°	54.1	54.1	54.1	54.5	54.9	55.0	55.2	55.2	55.2	55.9	56.7
77.5°	41.1	42.0	42.9	42.8	42.6	42.9	43.3	43.9	44.4	44.8	45.1
80°	30.0	30.0	30.0	30.1	30.3	30.9	31.4	31.8	32.1	32.8	33.6
82.5°	19.1	19.3	19.5	20.0	20.6	20.9	21.3	21.8	22.4	22.4	22.4
85°	11.9	11.5	11.2	11.5	11.9	12.3	12.6	12.8	13.0	13.4	13.7
87.5°	5.8	5.8	5.8	5.8	5.8	6.0	6.1	6.1	6.1	6.1	6.1
90°	23.7	23.4	23.0	22.7	22.3	21.8	21.1	20.4	19.7	19.0	16.7
92.5°	26.9	26.7	26.5	26.4	26.2	25.5	24.2	23.0	21.8	20.6	19.0
95°	30.0	30.0	30.0	30.0	30.0	29.4	28.2	27.0	25.7	24.5	22.6
97.5°	32.4	32.2	32.1	31.9	31.7	30.9	29.5	28.1	26.7	25.3	34.3
100°	33.2	33.0	32.9	32.7	32.5	31.7	30.3	28.9	27.5	26.1	53.5
102.5°	34.0	33.6	33.3	32.9	32.6	35.3	41.1	46.9	52.7	58.5	89.1
105°	34.8	34.4	34.1	33.7	33.4	48.8	79.9	111.0	142.1	173.2	189.0
107.5°	82.2	105.3	128.3	151.3	174.3	199.3	226.4	253.5	280.5	307.6	305.0
110°	217.4	242.6	267.7	292.8	318.0	333.4	339.2	345.0	350.8	356.6	354.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	412.0	412.3	412.7	413.0	413.4	412.8	411.2	409.6	408.0	406.4	404.5
115°	464.9	464.2	463.5	462.8	462.1	460.9	459.1	457.4	455.6	453.9	452.3
117.5°	507.6	507.5	507.3	507.1	506.9	506.1	504.7	503.3	501.9	500.5	499.6
120°	551.9	551.9	551.9	551.9	551.9	551.2	549.8	548.4	547.0	545.6	545.1
122.5°	595.4	595.2	595.1	594.9	594.7	594.2	593.3	592.4	591.5	590.7	590.0
125°	635.7	635.4	635.0	634.7	634.3	634.0	633.6	633.3	632.9	632.6	631.9
127.5°	675.3	675.6	676.0	676.3	676.7	676.6	676.1	675.5	675.0	674.5	673.6
130°	713.2	713.6	713.9	714.3	714.6	714.5	713.8	713.0	712.3	711.6	710.9
132.5°	748.0	748.5	749.1	749.6	750.1	750.0	749.3	748.6	747.9	747.2	746.7
135°	783.6	784.1	784.7	785.2	785.7	785.7	785.2	784.7	784.1	783.6	782.9
137.5°	817.6	817.9	818.3	818.7	819.0	818.7	817.9	817.0	816.1	815.2	814.9
140°	847.6	848.0	848.3	848.7	849.1	848.9	848.2	847.5	846.8	846.1	845.5
142.5°	875.3	875.8	876.4	876.9	877.4	877.4	876.9	876.4	875.8	875.3	874.8
145°	903.8	903.8	903.8	903.8	903.8	903.6	903.3	902.9	902.6	902.2	901.9
147.5°	924.3	925.2	926.1	927.0	927.9	928.1	927.8	927.4	927.1	926.7	926.4
150°	948.1	948.6	949.1	949.6	950.2	950.3	949.9	949.6	949.2	948.9	948.5
152.5°	967.0	967.9	968.8	969.7	970.6	970.6	969.9	969.2	968.5	967.8	967.7
155°	984.4	985.5	986.5	987.6	988.7	988.7	987.9	987.0	986.1	985.2	985.1
157.5°	999.5	1000.9	1002.3	1003.7	1005.1	1005.3	1004.2	1003.2	1002.1	1001.0	1001.2
160°	1013.7	1014.9	1016.2	1017.4	1018.6	1018.7	1017.6	1016.6	1015.5	1014.5	1014.7
162.5°	1027.1	1028.2	1029.2	1030.3	1031.4	1031.3	1030.0	1028.8	1027.6	1026.3	1026.5
165°	1037.4	1038.6	1039.9	1041.1	1042.3	1042.2	1040.8	1039.4	1038.0	1036.6	1036.8
167.5°	1045.3	1046.7	1048.1	1049.5	1050.9	1050.9	1049.5	1048.1	1046.7	1045.3	1045.3
170°	1052.4	1053.8	1055.3	1056.7	1058.1	1058.1	1056.7	1055.3	1053.8	1052.4	1052.4
172.5°	1056.4	1058.0	1059.6	1061.1	1062.7	1062.8	1061.4	1060.0	1058.6	1057.2	1057.0
175°	1060.3	1061.8	1063.2	1064.6	1066.0	1066.1	1064.8	1063.6	1062.4	1061.1	1061.0
177.5°	1061.1	1062.9	1064.7	1066.4	1068.2	1068.3	1066.9	1065.5	1064.1	1062.7	1062.5
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	831.9	829.8	821.8	813.9	804.9	795.8	789.2	782.5	772.6	762.6	754.5
5°	901.6	891.5	874.7	857.9	835.2	812.4	797.1	781.8	761.2	740.6	724.2
7.5°	956.8	939.5	916.0	892.6	862.8	833.0	804.9	776.7	745.3	713.9	688.3
10°	992.0	980.3	953.2	926.1	886.2	846.4	807.0	767.7	727.3	686.8	652.9
12.5°	995.4	996.5	971.6	946.7	901.6	856.5	808.6	760.8	709.9	659.0	619.5
15°	965.3	983.9	970.2	956.4	911.0	865.5	806.7	747.8	689.2	630.5	584.9
17.5°	909.3	949.2	951.2	953.2	907.7	862.2	797.1	731.9	665.5	599.1	551.1
20°	833.0	891.8	912.0	932.3	895.3	858.3	788.3	718.2	643.9	569.5	519.2
22.5°	755.0	826.5	863.5	900.5	873.1	845.6	771.1	696.6	618.1	539.6	488.5
25°	666.3	744.2	801.1	857.9	841.1	824.3	750.9	677.4	593.9	510.3	458.2
27.5°	588.8	668.1	736.6	805.2	801.6	798.0	725.1	652.2	566.6	481.1	430.8
30°	519.9	593.7	670.4	747.1	755.9	764.8	694.4	624.0	538.3	452.6	404.1
32.5°	458.9	523.3	605.6	687.9	705.2	722.6	659.0	595.5	510.7	425.9	379.1
35°	408.9	467.4	549.7	632.0	653.6	675.3	620.1	564.8	482.2	399.5	355.0
37.5°	364.7	413.6	493.9	574.2	600.8	627.3	577.8	528.4	451.0	373.6	332.6
40°	328.1	367.4	441.2	515.0	545.7	576.4	535.6	494.8	421.4	347.9	310.2
42.5°	297.4	332.4	399.4	466.3	495.7	525.1	490.7	456.2	390.9	325.6	291.1
45°	271.2	299.2	360.0	420.8	448.8	476.8	447.2	417.6	360.0	302.5	270.3
47.5°	246.7	270.7	322.7	374.6	399.5	424.4	401.3	378.2	329.5	280.8	251.7
50°	224.7	244.0	289.5	334.9	356.6	378.2	357.9	337.5	297.4	257.3	232.1
52.5°	205.5	221.2	259.3	297.4	316.0	334.6	317.1	299.6	267.8	236.0	214.0
55°	186.6	199.9	233.0	266.0	278.6	291.3	277.7	264.2	238.6	212.9	194.4
57.5°	168.9	180.8	207.9	235.0	244.7	254.4	242.2	229.9	210.6	191.3	175.8
60°	151.6	161.3	183.9	206.4	212.4	218.4	208.4	198.5	185.0	171.4	157.5
62.5°	135.5	144.4	161.2	177.9	181.9	185.9	178.3	170.7	160.4	150.1	139.3
65°	118.9	125.6	139.3	153.0	155.6	158.1	151.4	144.7	137.0	129.2	121.3
67.5°	103.6	108.3	119.5	130.7	130.8	131.0	125.6	120.2	115.9	111.5	105.2
70°	88.6	93.1	100.5	107.9	108.1	108.3	103.9	99.6	96.4	93.1	88.4
72.5°	73.3	76.5	82.1	87.7	87.3	87.0	84.3	81.6	79.0	76.5	73.1
75°	59.4	62.1	65.9	69.7	68.6	67.5	66.0	64.6	62.4	60.3	58.1
77.5°	46.7	48.4	50.5	52.7	52.0	51.3	50.0	48.7	47.1	45.5	44.6
80°	34.3	35.0	36.5	37.9	37.5	37.2	35.7	34.3	33.9	33.6	32.3
82.5°	23.3	24.2	24.5	24.9	24.7	24.5	23.5	22.4	22.0	21.7	21.5
85°	13.9	14.1	14.3	14.4	13.9	13.4	13.0	12.6	12.6	12.6	12.5
87.5°	6.3	6.5	6.5	6.5	6.3	6.1	5.8	5.4	5.6	5.8	5.8
90°	14.4	12.1	9.8	7.8	6.1	4.3	2.5	0.8	2.5	4.3	6.1
92.5°	17.4	15.8	14.2	14.0	15.0	16.1	17.1	18.2	17.1	16.1	15.0
95°	20.6	18.7	16.8	19.4	26.6	33.8	41.0	48.2	41.0	33.8	26.6
97.5°	43.2	52.2	61.1	68.1	73.0	77.9	82.8	87.8	82.8	77.9	73.0
100°	80.9	108.3	135.7	147.7	144.2	140.7	137.1	133.6	137.1	140.7	144.2
102.5°	119.7	150.2	180.8	195.0	192.7	190.4	188.1	185.8	188.1	190.4	192.7
105°	204.8	220.6	236.4	243.4	241.4	239.5	237.6	235.6	237.6	239.5	241.4
107.5°	302.3	299.7	297.0	294.9	293.4	291.8	290.2	288.6	290.2	291.8	293.4
110°	352.7	350.8	348.9	347.2	345.8	344.4	343.0	341.6	343.0	344.4	345.8



TEST NUMBER: P831327

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	402.6	400.6	398.7	397.1	395.9	394.7	393.4	392.2	393.4	394.7	395.9
115°	450.7	449.1	447.5	446.2	445.2	444.1	443.1	442.0	443.1	444.1	445.2
117.5°	498.8	497.9	497.0	496.0	494.7	493.5	492.3	491.0	492.3	493.5	494.7
120°	544.5	544.0	543.5	542.4	540.8	539.3	537.7	536.1	537.7	539.3	540.8
122.5°	589.3	588.6	587.9	586.9	585.7	584.4	583.2	582.0	583.2	584.4	585.7
125°	631.2	630.5	629.8	628.7	627.3	625.9	624.5	623.1	624.5	625.9	627.3
127.5°	672.7	671.8	671.0	669.8	668.4	667.0	665.6	664.2	665.6	667.0	668.4
130°	710.2	709.5	708.8	707.8	706.4	705.0	703.6	702.2	703.6	705.0	706.4
132.5°	746.2	745.6	745.1	744.1	742.7	741.3	739.9	738.5	739.9	741.3	742.7
135°	782.2	781.5	780.8	779.9	778.9	777.8	776.7	775.7	776.7	777.8	778.9
137.5°	814.5	814.2	813.8	812.9	811.5	810.1	808.7	807.3	808.7	810.1	811.5
140°	845.0	844.5	844.0	843.2	842.1	841.1	840.0	838.9	840.0	841.1	842.1
142.5°	874.3	873.7	873.2	872.4	871.4	870.3	869.3	868.2	869.3	870.3	871.4
145°	901.5	901.1	900.8	900.0	898.8	897.5	896.3	895.1	896.3	897.5	898.8
147.5°	926.0	925.7	925.3	924.7	923.8	922.9	922.1	921.2	922.1	922.9	923.8
150°	948.2	947.8	947.4	947.0	946.5	946.0	945.4	944.9	945.4	946.0	946.5
152.5°	967.5	967.3	967.1	967.0	966.8	966.6	966.4	966.3	966.4	966.6	966.8
155°	984.9	984.7	984.5	984.6	985.0	985.3	985.7	986.0	985.7	985.3	985.0
157.5°	1001.4	1001.6	1001.7	1001.8	1001.8	1001.8	1001.8	1001.8	1001.8	1001.8	1001.8
160°	1014.8	1015.0	1015.2	1015.4	1015.5	1015.7	1015.9	1016.1	1015.9	1015.7	1015.5
162.5°	1026.7	1026.9	1027.0	1027.4	1027.9	1028.5	1029.0	1029.5	1029.0	1028.5	1027.9
165°	1037.0	1037.2	1037.3	1037.7	1038.2	1038.7	1039.3	1039.8	1039.3	1038.7	1038.2
167.5°	1045.3	1045.3	1045.3	1045.7	1046.4	1047.1	1047.8	1048.5	1047.8	1047.1	1046.4
170°	1052.4	1052.4	1052.4	1052.8	1053.5	1054.2	1054.9	1055.6	1054.9	1054.2	1053.5
172.5°	1056.8	1056.7	1056.5	1056.8	1057.7	1058.6	1059.5	1060.3	1059.5	1058.6	1057.7
175°	1060.8	1060.6	1060.4	1060.8	1061.7	1062.5	1063.4	1064.3	1063.4	1062.5	1061.7
177.5°	1062.4	1062.2	1062.0	1062.4	1063.2	1064.1	1065.0	1065.9	1065.0	1064.1	1063.2
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



TEST NUMBER: P831327

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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	746.4	739.3	732.3	726.9	721.5	712.3	703.1	700.9	698.7	695.7	692.6
5°	707.8	690.4	673.1	657.6	642.1	630.0	617.9	610.0	602.0	596.2	590.5
7.5°	662.6	636.7	610.7	592.3	573.9	556.4	538.9	533.3	527.7	520.1	512.5
10°	619.0	590.3	561.6	537.6	513.6	496.4	479.3	472.4	465.6	456.0	446.5
12.5°	580.0	548.6	517.2	493.0	468.8	452.2	435.6	425.7	415.8	410.4	405.0
15°	539.2	505.6	472.1	449.7	427.3	412.4	397.4	388.7	380.0	374.8	369.6
17.5°	503.1	469.9	436.7	415.2	393.8	380.0	366.3	358.8	351.2	347.2	343.2
20°	468.8	436.4	403.9	382.9	362.0	350.8	339.6	334.8	329.9	326.6	323.4
22.5°	437.4	405.5	373.6	355.7	337.8	328.8	319.8	316.3	312.9	310.2	307.5
25°	406.0	377.5	349.0	333.9	318.7	311.3	303.9	300.5	297.0	294.3	291.6
27.5°	380.4	353.2	325.9	312.9	299.9	294.2	288.4	285.7	283.0	280.4	277.9
30°	355.5	331.1	306.8	295.6	284.4	279.2	273.9	271.2	268.5	266.2	263.8
32.5°	332.4	311.5	290.5	280.3	270.0	265.6	261.3	258.1	254.8	253.0	251.2
35°	310.4	291.6	272.9	264.4	255.9	251.6	247.2	244.5	241.8	240.4	238.9
37.5°	291.6	274.8	258.1	249.9	241.8	237.7	233.5	231.2	228.8	228.3	227.7
40°	272.5	258.1	243.6	235.7	227.7	224.1	220.5	219.1	217.6	217.3	216.9
42.5°	256.6	242.5	228.5	221.2	214.0	211.0	207.9	207.2	206.4	207.0	207.5
45°	238.2	226.5	214.7	208.1	201.4	198.9	196.3	195.8	195.3	196.3	197.4
47.5°	222.7	211.9	201.0	194.7	188.4	186.6	184.8	184.6	184.4	185.9	187.3
50°	206.8	196.3	185.9	180.8	175.8	174.1	172.5	173.1	173.6	175.9	178.3
52.5°	192.0	182.3	172.5	167.8	163.1	162.1	161.0	162.2	163.5	166.0	168.5
55°	175.8	166.9	158.1	154.5	150.9	149.8	148.7	151.2	153.8	156.1	158.4
57.5°	160.2	152.5	144.7	141.5	138.2	138.1	137.9	140.2	142.6	145.1	147.6
60°	143.6	137.1	130.7	128.1	125.6	126.0	126.3	129.0	131.7	133.7	135.7
62.5°	128.5	123.1	117.7	115.3	113.0	113.9	114.8	117.5	120.2	122.5	124.9
65°	113.3	108.8	104.3	102.7	101.1	102.3	103.6	105.9	108.3	109.9	111.5
67.5°	98.9	95.1	91.3	90.0	88.8	90.0	91.3	93.7	96.0	97.6	99.3
70°	83.7	80.7	77.6	76.7	75.8	77.2	78.7	80.7	82.7	84.3	85.9
72.5°	69.7	67.3	65.0	64.8	64.6	65.9	67.1	69.1	71.1	72.2	73.3
75°	55.9	54.7	53.4	53.2	53.1	54.3	55.6	56.7	57.7	58.6	59.6
77.5°	43.7	42.6	41.5	41.7	41.9	42.8	43.7	44.8	45.8	46.4	46.9
80°	31.0	30.7	30.3	30.7	31.0	31.8	32.5	33.2	33.9	34.3	34.6
82.5°	21.3	20.9	20.6	21.1	21.7	22.2	22.7	23.3	23.8	24.0	24.2
85°	12.3	12.8	13.4	13.4	13.4	13.5	13.7	13.9	14.1	13.9	13.7
87.5°	5.8	6.0	6.1	6.1	6.1	6.3	6.5	6.5	6.5	6.3	6.1
90°	7.8	9.8	12.1	14.4	16.7	19.0	19.7	20.4	21.1	21.8	22.3
92.5°	14.0	14.2	15.8	17.4	19.0	20.6	21.8	23.0	24.2	25.5	26.2
95°	19.4	16.8	18.7	20.6	22.6	24.5	25.7	27.0	28.2	29.4	30.0
97.5°	68.1	61.1	52.2	43.2	34.3	25.3	26.7	28.1	29.5	30.9	31.7
100°	147.7	135.7	108.3	80.9	53.5	26.1	27.5	28.9	30.3	31.7	32.5
102.5°	195.0	180.8	150.2	119.7	89.1	58.5	52.7	46.9	41.1	35.3	32.6
105°	243.4	236.4	220.6	204.8	189.0	173.2	142.1	111.0	79.9	48.8	33.4
107.5°	294.9	297.0	299.7	302.3	305.0	307.6	280.5	253.5	226.4	199.3	174.3
110°	347.2	348.9	350.8	352.7	354.7	356.6	350.8	345.0	339.2	333.4	318.0



TEST NUMBER: P831327

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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	397.1	398.7	400.6	402.6	404.5	406.4	408.0	409.6	411.2	412.8	413.4
115°	446.2	447.5	449.1	450.7	452.3	453.9	455.6	457.4	459.1	460.9	462.1
117.5°	496.0	497.0	497.9	498.8	499.6	500.5	501.9	503.3	504.7	506.1	506.9
120°	542.4	543.5	544.0	544.5	545.1	545.6	547.0	548.4	549.8	551.2	551.9
122.5°	586.9	587.9	588.6	589.3	590.0	590.7	591.5	592.4	593.3	594.2	594.7
125°	628.7	629.8	630.5	631.2	631.9	632.6	632.9	633.3	633.6	634.0	634.3
127.5°	669.8	671.0	671.8	672.7	673.6	674.5	675.0	675.5	676.1	676.6	676.7
130°	707.8	708.8	709.5	710.2	710.9	711.6	712.3	713.0	713.8	714.5	714.6
132.5°	744.1	745.1	745.6	746.2	746.7	747.2	747.9	748.6	749.3	750.0	750.1
135°	779.9	780.8	781.5	782.2	782.9	783.6	784.1	784.7	785.2	785.7	785.7
137.5°	812.9	813.8	814.2	814.5	814.9	815.2	816.1	817.0	817.9	818.7	819.0
140°	843.2	844.0	844.5	845.0	845.5	846.1	846.8	847.5	848.2	848.9	849.1
142.5°	872.4	873.2	873.7	874.3	874.8	875.3	875.8	876.4	876.9	877.4	877.4
145°	900.0	900.8	901.1	901.5	901.9	902.2	902.6	902.9	903.3	903.6	903.8
147.5°	924.7	925.3	925.7	926.0	926.4	926.7	927.1	927.4	927.8	928.1	927.9
150°	947.0	947.4	947.8	948.2	948.5	948.9	949.2	949.6	949.9	950.3	950.2
152.5°	967.0	967.1	967.3	967.5	967.7	967.8	968.5	969.2	969.9	970.6	970.6
155°	984.6	984.5	984.7	984.9	985.1	985.2	986.1	987.0	987.9	988.7	988.7
157.5°	1001.8	1001.7	1001.6	1001.4	1001.2	1001.0	1002.1	1003.2	1004.2	1005.3	1005.1
160°	1015.4	1015.2	1015.0	1014.8	1014.7	1014.5	1015.5	1016.6	1017.6	1018.7	1018.6
162.5°	1027.4	1027.0	1026.9	1026.7	1026.5	1026.3	1027.6	1028.8	1030.0	1031.3	1031.4
165°	1037.7	1037.3	1037.2	1037.0	1036.8	1036.6	1038.0	1039.4	1040.8	1042.2	1042.3
167.5°	1045.7	1045.3	1045.3	1045.3	1045.3	1045.3	1046.7	1048.1	1049.5	1050.9	1050.9
170°	1052.8	1052.4	1052.4	1052.4	1052.4	1052.4	1053.8	1055.3	1056.7	1058.1	1058.1
172.5°	1056.8	1056.5	1056.7	1056.8	1057.0	1057.2	1058.6	1060.0	1061.4	1062.8	1062.7
175°	1060.8	1060.4	1060.6	1060.8	1061.0	1061.1	1062.4	1063.6	1064.8	1066.1	1066.0
177.5°	1062.4	1062.0	1062.2	1062.4	1062.5	1062.7	1064.1	1065.5	1066.9	1068.3	1068.2
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



TEST NUMBER: P831327

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	777.8	777.8	777.8	777.8
2.5°	691.3	690.1	685.0	680.0
5°	586.1	581.8	580.4	578.9
7.5°	512.1	511.8	504.2	496.6
10°	447.0	447.5	440.7	433.8
12.5°	400.4	395.9	395.4	394.8
15°	365.4	361.3	360.6	359.8
17.5°	340.7	338.2	337.5	336.7
20°	321.9	320.5	319.2	318.0
22.5°	305.7	303.9	302.8	301.7
25°	290.0	288.4	288.0	287.7
27.5°	275.9	273.9	273.9	273.9
30°	262.6	261.3	260.8	260.2
32.5°	250.1	249.0	249.0	249.0
35°	238.4	237.8	237.1	236.4
37.5°	227.7	227.7	227.4	227.0
40°	217.5	218.0	218.0	218.0
42.5°	208.1	208.6	208.6	208.6
45°	198.3	199.2	199.6	199.9
47.5°	188.8	190.2	190.6	190.9
50°	179.4	180.5	180.6	180.8
52.5°	169.8	171.1	172.0	172.9
55°	159.7	161.0	161.5	162.1
57.5°	148.9	150.1	150.3	150.5
60°	137.0	138.2	138.6	139.0
62.5°	125.6	126.3	126.7	127.0
65°	112.6	113.7	114.4	115.1
67.5°	100.2	101.1	101.1	101.1
70°	86.3	86.6	87.2	87.7
72.5°	73.4	73.6	73.6	73.6
75°	59.9	60.3	60.5	60.6
77.5°	47.1	47.3	47.3	47.3
80°	34.5	34.3	34.3	34.3
82.5°	23.6	23.1	23.1	23.1
85°	13.5	13.4	13.5	13.7
87.5°	6.1	6.1	6.1	6.1
90°	22.7	23.0	23.4	23.7
92.5°	26.4	26.5	26.7	26.9
95°	30.0	30.0	30.0	30.0
97.5°	31.9	32.1	32.2	32.4
100°	32.7	32.9	33.0	33.2
102.5°	32.9	33.3	33.6	34.0
105°	33.7	34.1	34.4	34.8
107.5°	151.3	128.3	105.3	82.2
110°	292.8	267.7	242.6	217.4



TEST NUMBER: P831327

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	413.0	412.7	412.3	412.0
115°	462.8	463.5	464.2	464.9
117.5°	507.1	507.3	507.5	507.6
120°	551.9	551.9	551.9	551.9
122.5°	594.9	595.1	595.2	595.4
125°	634.7	635.0	635.4	635.7
127.5°	676.3	676.0	675.6	675.3
130°	714.3	713.9	713.6	713.2
132.5°	749.6	749.1	748.5	748.0
135°	785.2	784.7	784.1	783.6
137.5°	818.7	818.3	817.9	817.6
140°	848.7	848.3	848.0	847.6
142.5°	876.9	876.4	875.8	875.3
145°	903.8	903.8	903.8	903.8
147.5°	927.0	926.1	925.2	924.3
150°	949.6	949.1	948.6	948.1
152.5°	969.7	968.8	967.9	967.0
155°	987.6	986.5	985.5	984.4
157.5°	1003.7	1002.3	1000.9	999.5
160°	1017.4	1016.2	1014.9	1013.7
162.5°	1030.3	1029.2	1028.2	1027.1
165°	1041.1	1039.9	1038.6	1037.4
167.5°	1049.5	1048.1	1046.7	1045.3
170°	1056.7	1055.3	1053.8	1052.4
172.5°	1061.1	1059.6	1058.0	1056.4
175°	1064.6	1063.2	1061.8	1060.3
177.5°	1066.4	1064.7	1062.9	1061.1
180°	1064.3	1064.3	1064.3	1064.3



TEST NUMBER: P831327

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	8.41	9.08	9.54	10.20	11.76	10.65	11.32	11.78	12.44	14.00
	3H	10.04	10.65	11.18	11.78	13.35	12.06	12.66	13.20	13.79	15.36
	4H	10.61	11.19	11.76	12.31	13.89	12.50	13.07	13.65	14.20	15.78
	6H	10.97	11.50	12.13	12.63	14.22	12.77	13.29	13.92	14.42	16.01
	8H	11.07	11.57	12.22	12.71	14.30	12.82	13.33	13.98	14.47	16.05
	12H	11.10	11.58	12.27	12.72	14.32	12.84	13.31	14.00	14.45	16.06
4H	2H	8.96	9.54	10.12	10.67	12.24	10.79	11.36	11.95	12.49	14.07
	3H	10.78	11.25	11.94	12.41	14.00	12.39	12.87	13.55	14.02	15.61
	4H	11.47	11.91	12.63	13.05	14.66	12.97	13.41	14.13	14.55	16.16
	6H	11.93	12.31	13.10	13.47	15.07	13.36	13.74	14.53	14.90	16.50
	8H	12.06	12.42	13.23	13.57	15.19	13.47	13.82	14.64	14.98	16.60
	12H	12.12	12.44	13.31	13.61	15.23	13.51	13.82	14.69	14.99	16.61
8H	4H	11.72	12.07	12.89	13.23	14.84	13.06	13.41	14.23	14.57	16.18
	6H	12.30	12.59	13.49	13.79	15.40	13.56	13.84	14.74	15.04	16.66
	8H	12.51	12.76	13.70	13.94	15.57	13.73	13.99	14.93	15.16	16.80
	12H	12.62	12.84	13.82	14.02	15.69	13.83	14.05	15.02	15.22	16.89
12H	4H	11.71	12.03	12.89	13.20	14.82	13.03	13.34	14.21	14.51	16.13
	6H	12.35	12.60	13.54	13.78	15.41	13.57	13.82	14.76	15.00	16.63
	8H	12.58	12.80	13.77	13.97	15.64	13.76	13.98	14.96	15.16	16.82