

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: P832159

Luminaire Tested: S123RDIP-S340D805U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832159
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D805U930-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

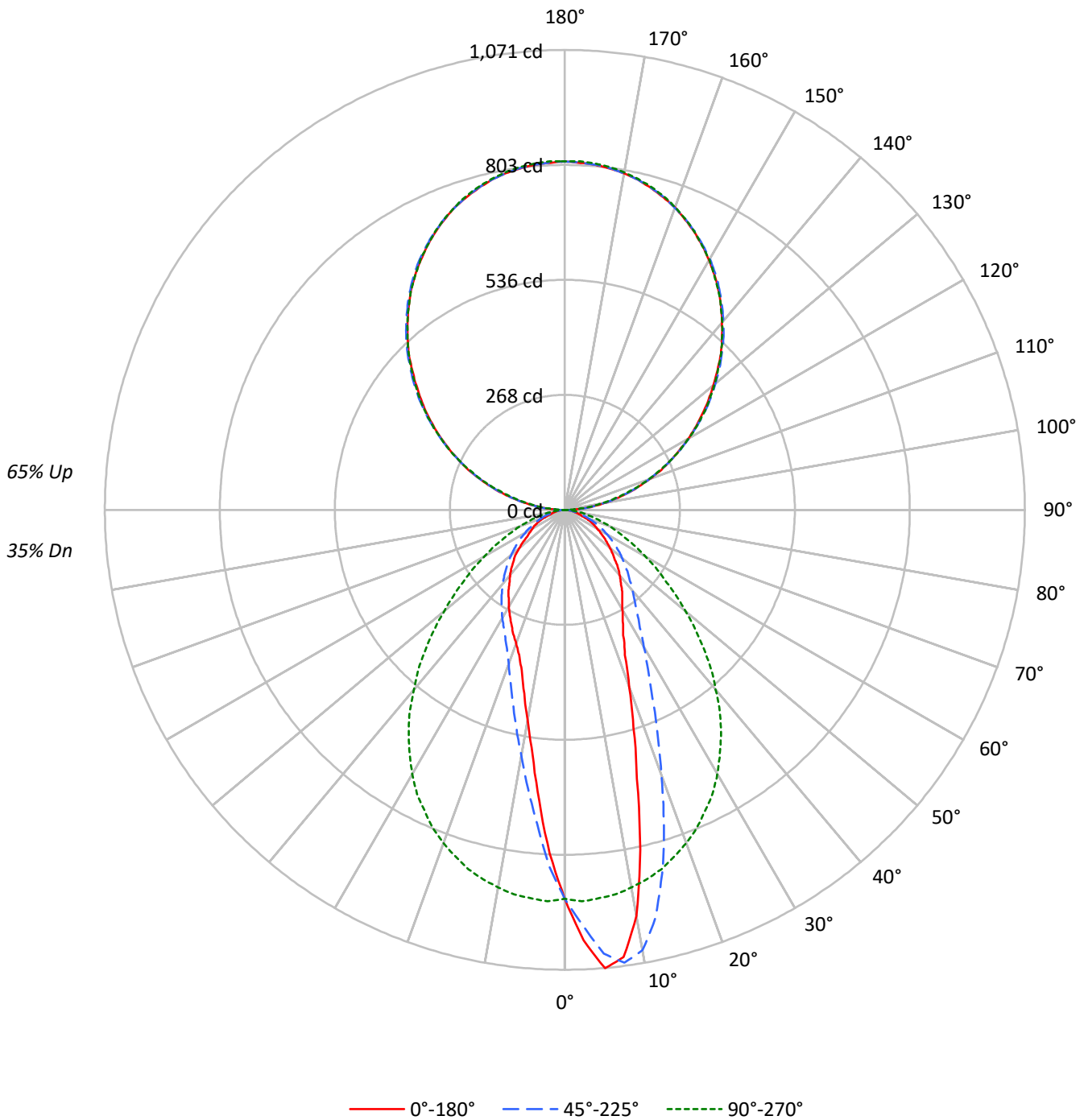
Lumens per Lamp: N/A
Luminaire Lumens: 3451.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 33
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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	95	91	87	84	86	82	79	77	66	64	62	52	50	49	38	37	37	30
2	87	80	74	70	78	73	68	64	59	55	53	46	44	42	34	33	32	26
3	80	71	64	59	72	64	59	54	52	48	45	41	39	36	31	29	28	23
4	73	63	56	50	66	58	51	46	47	42	39	37	34	32	28	26	24	20
5	67	57	49	43	61	52	45	40	42	38	34	34	30	28	26	24	22	18
6	62	51	43	38	56	47	40	35	38	34	30	31	27	25	24	21	20	16
7	58	46	39	33	52	42	36	31	35	30	27	28	25	22	22	19	18	15
8	54	42	35	30	49	39	32	28	32	27	24	26	22	20	20	18	16	14
9	50	38	31	27	45	35	29	25	30	25	22	24	21	18	19	16	15	13
10	47	35	29	24	43	33	27	23	27	23	20	22	19	17	18	15	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9749	9749	9749	9749	9749
5°	11577	11207	9811	7931	7363
10°	10488	11384	9762	6355	5451
15°	7221	9760	9658	5194	4313
20°	5024	7514	9465	4379	3790
25°	3828	5727	9183	3892	3493
30°	3332	4579	8830	3614	3235
35°	3059	3862	8330	3380	3001
40°	2792	3450	7676	3149	2786
45°	2521	3154	6970	2930	2573
50°	2289	2910	6137	2718	2308
55°	2070	2672	5339	2509	1980
60°	1856	2430	4637	2278	1871
65°	1712	2157	3991	2048	1768
70°	1391	1863	3484	1854	1438
75°	1219	1485	2949	1535	1268
80°	1103	1252	2417	1289	1196
85°	1013	1099	1840	1173	1099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 7354 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.6	2.4
10°-20°	191.0	5.5
20°-30°	219.2	6.4
30°-40°	216.0	6.3
40°-50°	190.5	5.5
50°-60°	146.6	4.2
60°-70°	96.4	2.8
70°-80°	46.8	1.4
80°-90°	13.5	0.4
90°-100°	52.2	1.5
100°-110°	158.1	4.6
110°-120°	269.1	7.8
120°-130°	354.1	10.3
130°-140°	398.0	11.5
140°-150°	391.3	11.3
150°-160°	329.4	9.5
160°-170°	219.3	6.4
170°-180°	76.8	2.2
0°-30°	492.8	14.3
0°-40°	708.8	20.5
0°-60°	1045.9	30.3
0°-90°	1202.6	34.8
90°-120°	479.5	13.9
90°-150°	1622.8	47.0
90°-180°	2248.0	65.1
0°-180°	3451.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	906	906	906	906	906	
5°	1071	1037	908	734	681	98
15°	648	876	867	466	387	183
25°	322	482	773	328	294	152
35°	233	294	634	257	228	145
45°	166	207	458	192	169	129
55°	110	142	284	134	106	99
65°	67	85	157	80	69	66
75°	29	36	71	37	30	32
85°	8	9	15	10	9	9
90°	19	15	1	15	19	9
95°	50	47	38	47	50	50
105°	152	150	143	150	152	161
115°	272	272	271	272	272	269
125°	392	397	396	397	392	351
135°	514	518	514	518	514	395
145°	624	627	624	627	624	390
155°	713	715	715	715	713	329
165°	776	776	778	776	776	219
175°	806	807	810	807	806	77
180°	812	812	812	812	812	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	1003.8	1000.6	997.5	996.5	995.6	992.6	989.7	983.0	976.3	969.4	962.6
5°	1071.4	1071.7	1072.1	1071.2	1070.2	1066.3	1062.4	1054.3	1046.1	1037.2	1028.3
7.5°	1050.6	1056.5	1062.4	1063.6	1064.7	1067.6	1070.6	1068.8	1066.9	1063.6	1060.2
10°	959.6	959.2	958.8	965.5	972.2	992.1	1011.9	1022.2	1032.4	1041.5	1050.6
12.5°	811.0	811.6	812.2	834.1	856.0	874.7	893.5	919.5	945.5	973.5	1001.5
15°	648.0	657.1	666.2	685.7	705.2	733.4	761.7	796.6	831.5	875.8	920.2
17.5°	532.2	536.1	540.0	558.7	577.5	604.2	630.9	670.5	710.0	767.2	824.4
20°	438.6	442.1	445.6	459.2	472.7	498.4	524.0	561.7	599.4	656.0	712.6
22.5°	366.2	373.0	379.9	389.0	398.1	416.7	435.2	473.7	512.1	563.7	615.3
25°	322.3	325.5	328.7	336.4	344.2	362.1	379.9	405.3	430.8	482.2	533.6
27.5°	292.6	293.6	294.5	300.2	306.0	317.5	329.0	352.6	376.2	418.5	460.9
30°	268.1	269.8	271.5	275.9	280.4	288.7	297.1	313.8	330.5	368.4	406.3
32.5°	249.2	250.1	251.0	254.8	258.5	264.6	270.7	283.9	297.1	326.1	355.0
35°	232.8	233.0	233.2	236.0	238.8	244.7	250.7	261.6	272.6	293.9	315.3
37.5°	214.3	215.6	216.9	218.9	221.0	226.2	231.4	240.3	249.2	266.8	284.5
40°	198.7	199.8	200.9	203.3	205.7	209.8	213.9	222.1	230.2	245.5	260.7
42.5°	183.1	183.8	184.6	187.0	189.4	194.4	199.4	205.9	212.4	225.0	237.7
45°	165.6	167.5	169.3	171.9	174.5	178.8	183.1	189.8	196.4	207.2	218.0
47.5°	151.1	152.1	153.0	155.2	157.5	162.7	167.9	173.8	179.7	189.8	199.8
50°	136.7	137.0	137.4	139.4	141.5	146.1	150.8	157.6	164.5	173.8	183.1
52.5°	122.9	123.8	124.8	126.8	128.9	132.0	135.2	142.2	149.3	158.4	167.5
55°	110.3	110.8	111.4	112.9	114.4	118.1	121.8	127.9	134.1	142.4	150.8
57.5°	98.4	99.2	99.9	101.0	102.1	105.5	108.8	114.2	119.6	127.9	136.3
60°	86.2	87.1	88.0	89.3	90.6	93.2	95.8	100.6	105.5	112.9	120.3
62.5°	77.2	77.4	77.6	78.7	79.8	81.7	83.6	87.5	91.4	98.8	106.2
65°	67.2	67.8	68.3	68.9	69.4	70.9	72.4	75.8	79.1	84.7	90.2
67.5°	56.8	57.4	57.9	58.9	59.8	61.1	62.4	64.6	66.8	72.0	77.2
70°	44.2	44.2	44.2	45.7	47.2	49.4	51.6	53.3	55.0	59.2	63.5
72.5°	36.0	36.2	36.4	36.6	36.8	38.1	39.4	42.1	44.9	47.5	50.1
75°	29.3	29.5	29.7	29.9	30.1	30.5	30.8	31.8	32.7	35.7	38.6
77.5°	23.4	23.6	23.8	24.0	24.1	24.5	24.9	25.3	25.6	26.7	27.9
80°	17.8	18.0	18.2	18.4	18.6	18.8	18.9	19.3	19.7	20.2	20.8
82.5°	13.0	13.0	13.0	13.0	13.0	13.4	13.7	13.7	13.7	14.1	14.5
85°	8.2	8.2	8.2	8.4	8.5	8.5	8.5	8.7	8.9	8.9	8.9
87.5°	3.7	3.5	3.3	3.5	3.7	3.7	3.7	3.9	4.1	4.1	4.1
90°	19.1	18.8	18.6	18.3	18.0	17.6	17.0	16.4	15.9	15.3	13.5
92.5°	27.4	27.7	28.0	28.3	28.5	28.5	28.0	27.6	27.2	26.8	25.9
95°	49.7	49.7	49.7	49.7	49.7	49.4	48.9	48.3	47.7	47.2	46.0
97.5°	71.4	71.5	71.7	71.8	72.0	71.7	71.0	70.3	69.6	68.8	68.0
100°	96.9	96.6	96.3	96.0	95.8	95.4	95.0	94.6	94.1	93.7	93.0
102.5°	123.0	123.2	123.3	123.4	123.6	123.4	123.0	122.6	122.2	121.8	120.8
105°	151.7	151.4	151.1	150.9	150.6	150.4	150.4	150.4	150.4	150.4	149.2
107.5°	181.0	181.2	181.3	181.5	181.6	181.5	181.0	180.6	180.2	179.8	179.2
110°	211.0	211.3	211.6	211.8	212.1	212.0	211.4	210.8	210.3	209.7	209.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.9	242.9	242.9	242.9	242.9	242.5	241.8	241.1	240.4	239.7	239.7
115°	271.5	271.7	271.8	272.0	272.1	272.1	272.0	271.8	271.7	271.5	271.8
117.5°	300.9	301.3	301.7	302.1	302.6	302.8	302.8	302.8	302.8	302.8	303.1
120°	332.1	332.4	332.7	333.0	333.2	333.4	333.6	333.7	333.9	334.0	334.7
122.5°	362.1	362.5	362.9	363.3	363.8	364.2	364.6	365.0	365.5	365.9	366.2
125°	392.0	392.6	393.2	393.7	394.3	394.9	395.4	396.0	396.6	397.1	397.4
127.5°	422.0	422.5	423.1	423.7	424.2	425.0	425.8	426.7	427.5	428.4	428.6
130°	451.3	452.3	453.3	454.3	455.3	456.0	456.6	457.2	457.7	458.3	458.7
132.5°	481.9	482.6	483.3	484.0	484.7	485.4	486.2	486.9	487.6	488.3	488.6
135°	513.8	514.1	514.3	514.6	514.9	515.3	515.9	516.5	517.0	517.6	517.7
137.5°	541.8	542.2	542.7	543.1	543.5	544.1	544.8	545.5	546.2	546.9	546.5
140°	569.2	570.2	571.2	572.2	573.2	573.8	573.9	574.0	574.2	574.3	574.2
142.5°	597.3	598.0	598.7	599.4	600.1	600.5	600.7	600.8	601.0	601.1	600.8
145°	624.0	624.6	625.2	625.7	626.3	626.7	626.8	627.0	627.1	627.2	626.8
147.5°	648.3	649.1	650.0	650.8	651.7	652.1	652.1	652.1	652.1	652.1	651.7
150°	671.2	672.1	672.9	673.8	674.6	675.0	675.0	675.0	675.0	675.0	674.8
152.5°	693.5	694.2	694.9	695.7	696.4	696.6	696.3	696.0	695.7	695.4	695.3
155°	713.3	714.3	715.3	716.3	717.3	717.5	716.9	716.3	715.8	715.2	715.1
157.5°	731.8	732.6	733.5	734.3	735.2	735.3	734.8	734.2	733.6	733.1	732.9
160°	749.6	750.2	750.8	751.3	751.9	751.8	751.1	750.4	749.7	749.0	749.0
162.5°	763.0	764.0	765.0	766.0	767.0	767.1	766.4	765.7	765.0	764.3	764.1
165°	775.8	776.7	777.7	778.7	779.7	779.8	778.9	778.1	777.2	776.4	776.4
167.5°	787.2	788.1	788.9	789.8	790.6	790.6	789.8	788.9	788.1	787.2	787.1
170°	795.5	796.5	797.5	798.5	799.5	799.5	798.5	797.5	796.5	795.5	795.5
172.5°	801.9	802.9	803.9	804.9	805.9	805.9	805.1	804.2	803.4	802.5	802.5
175°	806.4	807.3	808.3	809.3	810.3	810.4	809.5	808.7	807.8	807.0	807.0
177.5°	808.9	809.9	810.9	811.9	812.9	812.9	812.1	811.2	810.4	809.5	809.5
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	961.6	960.7	951.8	942.9	934.1	925.4	918.9	912.4	901.5	890.5	883.6
5°	1021.2	1014.2	1000.1	986.0	964.8	943.6	925.8	908.0	885.3	862.7	843.7
7.5°	1054.5	1048.7	1031.6	1014.5	986.5	958.5	930.6	902.8	869.3	835.9	807.3
10°	1055.4	1060.2	1046.1	1032.0	1000.4	968.9	931.0	893.1	848.2	803.2	766.3
12.5°	1022.3	1043.1	1040.2	1037.2	1005.1	973.0	926.9	880.9	825.7	770.6	724.3
15°	960.5	1000.8	1012.7	1024.6	998.0	971.5	919.1	866.7	801.9	737.1	684.0
17.5°	880.9	937.3	968.7	1000.1	980.8	961.4	904.1	846.7	773.7	700.7	643.0
20°	786.5	860.4	909.6	958.8	951.8	944.7	885.5	826.3	747.5	668.8	606.2
22.5°	693.3	771.3	839.3	907.2	914.5	921.7	861.9	802.1	716.0	629.8	566.1
25°	612.9	692.2	773.2	854.1	870.5	886.8	830.0	773.2	683.9	594.5	531.2
27.5°	536.2	611.6	700.7	789.9	819.6	849.3	797.3	745.3	652.3	559.3	496.1
30°	473.7	541.1	632.0	723.0	764.4	805.8	758.1	710.4	618.1	525.8	464.0
32.5°	415.4	475.7	567.1	658.4	706.5	754.6	713.4	672.2	583.4	494.6	433.6
35°	369.3	423.3	508.6	593.8	647.6	701.5	667.7	633.9	547.2	460.5	402.7
37.5°	329.8	375.1	455.1	535.1	592.3	649.5	621.3	593.1	511.5	430.0	375.4
40°	297.1	333.5	407.9	482.4	538.5	594.5	570.4	546.3	473.3	400.3	349.3
42.5°	269.0	300.4	367.3	434.1	485.5	537.0	521.0	505.0	438.9	372.8	325.5
45°	244.4	270.7	329.6	388.4	435.8	483.1	470.5	457.9	400.9	343.9	300.4
47.5°	222.4	245.1	297.6	350.2	392.7	435.2	423.5	411.8	364.7	317.5	278.0
50°	202.4	221.7	265.5	309.3	347.6	385.8	376.2	366.5	327.5	288.5	254.4
52.5°	183.4	199.4	238.8	278.1	309.0	339.8	332.4	324.9	294.9	264.8	233.8
55°	165.4	180.1	213.3	246.6	272.9	299.3	291.9	284.5	261.1	237.7	210.4
57.5°	149.1	161.9	188.8	215.8	236.7	257.7	254.2	250.7	231.2	211.7	189.2
60°	131.8	143.3	166.6	189.8	206.7	223.6	219.5	215.4	201.5	187.5	168.2
62.5°	116.4	126.6	145.2	163.8	177.5	191.2	188.3	185.3	174.7	164.1	148.2
65°	100.3	110.3	125.3	140.4	151.1	161.9	159.3	156.7	148.7	140.7	127.9
67.5°	85.6	94.0	107.0	119.9	127.2	134.4	132.9	131.5	125.3	119.2	109.2
70°	70.7	78.0	88.8	99.5	104.5	109.6	110.1	110.7	105.1	99.5	92.1
72.5°	55.9	61.6	71.7	81.7	85.6	89.5	89.3	89.1	85.8	82.4	75.8
75°	42.9	47.2	55.0	62.8	66.1	69.4	70.2	70.9	67.8	64.6	60.9
77.5°	30.8	33.8	39.7	45.7	49.4	53.1	53.5	53.8	52.4	50.9	47.3
80°	21.7	22.7	26.4	30.1	34.0	37.9	38.4	39.0	37.5	36.0	33.8
82.5°	15.0	15.6	16.9	18.2	21.4	24.5	25.3	26.0	25.3	24.5	22.1
85°	9.1	9.3	9.8	10.4	11.9	13.4	14.1	14.9	14.5	14.1	12.8
87.5°	4.1	4.1	4.3	4.5	4.8	5.2	6.1	7.1	6.5	5.9	5.4
90°	11.6	9.8	7.9	6.3	4.9	3.5	2.1	0.6	2.1	3.5	4.9
92.5°	25.1	24.2	23.4	22.5	21.7	20.8	20.0	19.1	20.0	20.8	21.7
95°	44.9	43.8	42.6	41.6	40.6	39.6	38.6	37.6	38.6	39.6	40.6
97.5°	67.1	66.3	65.4	64.7	64.0	63.2	62.5	61.8	62.5	63.2	64.0
100°	92.3	91.6	90.9	90.1	89.2	88.4	87.5	86.7	87.5	88.4	89.2
102.5°	119.8	118.8	117.8	117.1	116.7	116.2	115.8	115.4	115.8	116.2	116.7
105°	147.9	146.6	145.3	144.6	144.3	144.0	143.7	143.4	143.7	144.0	144.3
107.5°	178.6	178.1	177.5	177.1	177.0	176.9	176.7	176.6	176.7	176.9	177.0
110°	209.1	208.9	208.6	208.3	208.0	207.7	207.4	207.2	207.4	207.7	208.0



TEST NUMBER: P832159

CATALOG NUMBER: S123RDIP-S340D805U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	239.7	239.7	239.7	239.6	239.5	239.3	239.2	239.0	239.2	239.3	239.5
115°	272.1	272.4	272.7	272.6	272.2	271.8	271.3	270.9	271.3	271.8	272.2
117.5°	303.3	303.6	303.9	304.0	303.8	303.7	303.6	303.4	303.6	303.7	303.8
120°	335.4	336.1	336.8	336.8	335.9	335.1	334.2	333.4	334.2	335.1	335.9
122.5°	366.5	366.7	367.0	366.9	366.3	365.7	365.2	364.6	365.2	365.7	366.3
125°	397.7	398.0	398.3	398.2	397.8	397.3	396.9	396.5	396.9	397.3	397.8
127.5°	428.9	429.2	429.5	429.2	428.4	427.5	426.7	425.8	426.7	427.5	428.4
130°	459.2	459.6	460.0	459.7	458.5	457.4	456.3	455.1	456.3	457.4	458.5
132.5°	488.8	489.1	489.4	489.0	487.9	486.7	485.6	484.5	485.6	486.7	487.9
135°	517.9	518.0	518.2	517.8	517.0	516.1	515.3	514.4	515.3	516.1	517.0
137.5°	546.1	545.6	545.2	544.7	543.9	543.2	542.5	541.8	542.5	543.2	543.9
140°	574.0	573.9	573.8	573.3	572.6	571.9	571.2	570.5	571.2	571.9	572.6
142.5°	600.5	600.3	600.0	599.5	598.8	598.1	597.3	596.6	597.3	598.1	598.8
145°	626.4	626.0	625.5	625.2	624.9	624.6	624.3	624.0	624.3	624.6	624.9
147.5°	651.2	650.8	650.4	649.9	649.3	648.8	648.2	647.6	648.2	648.8	649.3
150°	674.5	674.2	673.9	673.6	673.3	673.1	672.8	672.5	672.8	673.1	673.3
152.5°	695.2	695.0	694.9	694.6	694.2	693.7	693.3	692.9	693.3	693.7	694.2
155°	714.9	714.8	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6
157.5°	732.8	732.6	732.5	732.5	732.6	732.8	732.9	733.1	732.9	732.8	732.6
160°	749.0	749.0	749.0	749.1	749.4	749.7	750.0	750.3	750.0	749.7	749.4
162.5°	764.0	763.9	763.7	763.9	764.3	764.7	765.1	765.6	765.1	764.7	764.3
165°	776.4	776.4	776.4	776.6	777.0	777.5	777.9	778.3	777.9	777.5	777.0
167.5°	786.9	786.8	786.7	786.9	787.4	788.0	788.6	789.1	788.6	788.0	787.4
170°	795.5	795.5	795.5	795.8	796.4	796.9	797.5	798.1	797.5	796.9	796.4
172.5°	802.5	802.5	802.5	802.8	803.4	803.9	804.5	805.1	804.5	803.9	803.4
175°	807.0	807.0	807.0	807.3	807.8	808.4	809.0	809.5	809.0	808.4	807.8
177.5°	809.5	809.5	809.5	809.8	810.4	811.0	811.5	812.1	811.5	811.0	810.4
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5



TEST NUMBER: P832159

CATALOG NUMBER: S123RDIP-S340D805U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	876.8	866.2	855.6	848.0	840.4	830.9	821.4	821.1	820.7	813.6	806.6
5°	824.8	806.4	788.0	770.0	752.0	734.0	716.0	711.9	707.8	701.7	695.6
7.5°	778.7	749.4	720.1	697.0	674.0	656.0	638.0	625.7	613.5	604.0	594.5
10°	729.3	693.0	656.6	628.7	600.9	581.4	561.9	547.8	533.6	527.0	520.3
12.5°	678.1	638.5	599.0	571.7	544.4	521.0	497.6	484.8	472.0	462.7	453.4
15°	630.9	588.4	545.9	516.9	488.0	466.1	444.1	431.3	418.5	409.2	400.0
17.5°	585.3	542.4	499.5	470.1	440.8	420.9	401.1	388.6	376.2	370.4	364.7
20°	543.7	500.4	457.1	429.5	401.8	382.3	362.8	356.1	349.4	344.1	338.7
22.5°	502.4	460.9	419.3	392.7	366.2	352.0	337.9	332.5	327.2	323.1	319.0
25°	467.9	426.5	385.1	361.9	338.7	327.7	316.8	313.2	309.7	305.6	301.5
27.5°	433.0	393.6	354.3	335.7	317.1	308.2	299.3	294.9	290.4	287.1	283.7
30°	402.2	365.8	329.4	314.0	298.6	290.8	283.0	278.1	273.3	270.2	267.0
32.5°	372.5	340.2	307.9	294.7	281.5	273.9	266.3	261.6	257.0	253.3	249.6
35°	345.0	317.0	288.9	276.8	264.8	257.2	249.6	244.9	240.3	236.6	232.8
37.5°	320.9	295.4	270.0	258.6	247.3	240.6	234.0	229.1	224.3	220.4	216.5
40°	298.2	275.7	253.3	242.3	231.4	224.1	216.9	212.6	208.3	204.8	201.3
42.5°	278.1	257.5	236.9	226.2	215.4	208.5	201.6	196.6	191.6	189.6	187.5
45°	257.0	238.8	220.6	210.2	199.8	192.5	185.3	181.0	176.8	174.9	173.1
47.5°	238.4	221.5	204.6	194.4	184.2	177.7	171.2	167.9	164.5	161.9	159.3
50°	220.2	203.9	187.5	177.7	167.9	162.3	156.7	152.6	148.5	146.7	144.8
52.5°	202.8	187.9	173.1	163.0	153.0	147.6	142.2	138.7	135.2	131.3	127.4
55°	183.1	170.1	157.1	148.2	139.3	133.7	128.1	124.0	119.9	115.9	111.8
57.5°	166.7	153.9	141.1	133.1	125.1	119.8	114.4	109.9	105.5	102.1	98.8
60°	148.9	137.8	126.6	118.8	111.0	105.8	100.6	96.4	92.1	90.4	88.8
62.5°	132.2	121.8	111.4	104.5	97.7	92.7	87.6	84.9	82.1	81.0	79.8
65°	115.1	106.2	97.3	91.0	84.7	80.4	76.1	74.8	73.5	72.6	71.7
67.5°	99.2	91.5	83.9	78.4	72.8	69.8	66.8	65.4	63.9	62.8	61.6
70°	84.7	78.0	71.3	66.5	61.6	58.9	56.1	54.8	53.5	51.4	49.4
72.5°	69.1	63.9	58.7	55.0	51.2	48.8	46.4	43.8	41.2	39.4	37.5
75°	57.2	52.0	46.8	43.3	39.7	36.9	34.2	33.2	32.3	31.8	31.2
77.5°	43.8	39.4	34.9	32.1	29.3	28.0	26.7	26.2	25.6	25.4	25.3
80°	31.6	27.9	24.1	22.7	21.2	20.8	20.4	20.1	19.7	19.5	19.3
82.5°	19.7	17.8	16.0	15.6	15.2	15.0	14.9	14.7	14.5	14.3	14.1
85°	11.5	10.8	10.0	9.8	9.7	9.5	9.3	9.3	9.3	9.3	9.3
87.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.5
90°	6.3	7.9	9.8	11.6	13.5	15.3	15.9	16.4	17.0	17.6	18.0
92.5°	22.5	23.4	24.2	25.1	25.9	26.8	27.2	27.6	28.0	28.5	28.5
95°	41.6	42.6	43.8	44.9	46.0	47.2	47.7	48.3	48.9	49.4	49.7
97.5°	64.7	65.4	66.3	67.1	68.0	68.8	69.6	70.3	71.0	71.7	72.0
100°	90.1	90.9	91.6	92.3	93.0	93.7	94.1	94.6	95.0	95.4	95.8
102.5°	117.1	117.8	118.8	119.8	120.8	121.8	122.2	122.6	123.0	123.4	123.6
105°	144.6	145.3	146.6	147.9	149.2	150.4	150.4	150.4	150.4	150.4	150.6
107.5°	177.1	177.5	178.1	178.6	179.2	179.8	180.2	180.6	181.0	181.5	181.6
110°	208.3	208.6	208.9	209.1	209.4	209.7	210.3	210.8	211.4	212.0	212.1



TEST NUMBER: P832159

CATALOG NUMBER: S123RDIP-S340D805U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	239.6	239.7	239.7	239.7	239.7	239.7	240.4	241.1	241.8	242.5	242.9
115°	272.6	272.7	272.4	272.1	271.8	271.5	271.7	271.8	272.0	272.1	272.1
117.5°	304.0	303.9	303.6	303.3	303.1	302.8	302.8	302.8	302.8	302.8	302.6
120°	336.8	336.8	336.1	335.4	334.7	334.0	333.9	333.7	333.6	333.4	333.2
122.5°	366.9	367.0	366.7	366.5	366.2	365.9	365.5	365.0	364.6	364.2	363.8
125°	398.2	398.3	398.0	397.7	397.4	397.1	396.6	396.0	395.4	394.9	394.3
127.5°	429.2	429.5	429.2	428.9	428.6	428.4	427.5	426.7	425.8	425.0	424.2
130°	459.7	460.0	459.6	459.2	458.7	458.3	457.7	457.2	456.6	456.0	455.3
132.5°	489.0	489.4	489.1	488.8	488.6	488.3	487.6	486.9	486.2	485.4	484.7
135°	517.8	518.2	518.0	517.9	517.7	517.6	517.0	516.5	515.9	515.3	514.9
137.5°	544.7	545.2	545.6	546.1	546.5	546.9	546.2	545.5	544.8	544.1	543.5
140°	573.3	573.8	573.9	574.0	574.2	574.3	574.2	574.0	573.9	573.8	573.2
142.5°	599.5	600.0	600.3	600.5	600.8	601.1	601.0	600.8	600.7	600.5	600.1
145°	625.2	625.5	626.0	626.4	626.8	627.2	627.1	627.0	626.8	626.7	626.3
147.5°	649.9	650.4	650.8	651.2	651.7	652.1	652.1	652.1	652.1	652.1	651.7
150°	673.6	673.9	674.2	674.5	674.8	675.0	675.0	675.0	675.0	675.0	674.6
152.5°	694.6	694.9	695.0	695.2	695.3	695.4	695.7	696.0	696.3	696.6	696.4
155°	714.6	714.6	714.8	714.9	715.1	715.2	715.8	716.3	716.9	717.5	717.3
157.5°	732.5	732.5	732.6	732.8	732.9	733.1	733.6	734.2	734.8	735.3	735.2
160°	749.1	749.0	749.0	749.0	749.0	749.0	749.7	750.4	751.1	751.8	751.9
162.5°	763.9	763.7	763.9	764.0	764.1	764.3	765.0	765.7	766.4	767.1	767.0
165°	776.6	776.4	776.4	776.4	776.4	776.4	777.2	778.1	778.9	779.8	779.7
167.5°	786.9	786.7	786.8	786.9	787.1	787.2	788.1	788.9	789.8	790.6	790.6
170°	795.8	795.5	795.5	795.5	795.5	795.5	796.5	797.5	798.5	799.5	799.5
172.5°	802.8	802.5	802.5	802.5	802.5	802.5	803.4	804.2	805.1	805.9	805.9
175°	807.3	807.0	807.0	807.0	807.0	807.0	807.8	808.7	809.5	810.4	810.3
177.5°	809.8	809.5	809.5	809.5	809.5	809.5	810.4	811.2	812.1	812.9	812.9
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5



TEST NUMBER: P832159

CATALOG NUMBER: S123RDIP-S340D805U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	905.7	905.7	905.7	905.7
2.5°	804.7	802.9	802.1	801.4
5°	689.8	684.0	682.7	681.4
7.5°	592.1	589.7	581.7	573.7
10°	512.8	505.4	502.1	498.7
12.5°	446.6	439.7	438.6	437.5
15°	395.1	390.3	388.6	387.0
17.5°	361.3	358.0	355.9	353.9
20°	336.3	333.8	332.4	330.9
22.5°	317.1	315.3	314.2	313.1
25°	298.8	296.0	295.0	294.1
27.5°	281.3	278.9	278.0	277.0
30°	265.0	262.9	261.6	260.3
32.5°	247.1	244.7	244.0	243.2
35°	231.4	229.9	229.1	228.4
37.5°	214.6	212.8	211.7	210.6
40°	200.3	199.4	198.9	198.3
42.5°	185.9	184.2	184.0	183.8
45°	171.4	169.7	169.3	169.0
47.5°	157.8	156.3	156.2	156.0
50°	142.8	140.7	139.3	137.8
52.5°	125.5	123.7	122.4	121.1
55°	109.7	107.7	106.6	105.5
57.5°	97.9	96.9	96.4	95.8
60°	88.2	87.6	87.3	86.9
62.5°	79.3	78.7	78.7	78.7
65°	71.1	70.6	70.0	69.4
67.5°	60.5	59.4	59.2	59.0
70°	47.7	46.0	45.9	45.7
72.5°	37.3	37.1	36.8	36.4
75°	30.8	30.5	30.5	30.5
77.5°	24.9	24.5	24.5	24.5
80°	19.1	18.9	19.1	19.3
82.5°	14.1	14.1	13.9	13.7
85°	9.1	8.9	8.9	8.9
87.5°	4.5	4.5	4.5	4.5
90°	18.3	18.6	18.8	19.1
92.5°	28.3	28.0	27.7	27.4
95°	49.7	49.7	49.7	49.7
97.5°	71.8	71.7	71.5	71.4
100°	96.0	96.3	96.6	96.9
102.5°	123.4	123.3	123.2	123.0
105°	150.9	151.1	151.4	151.7
107.5°	181.5	181.3	181.2	181.0
110°	211.8	211.6	211.3	211.0



TEST NUMBER: P832159

CATALOG NUMBER: S123RDIP-S340D805U930-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	242.9	242.9	242.9	242.9
115°	272.0	271.8	271.7	271.5
117.5°	302.1	301.7	301.3	300.9
120°	333.0	332.7	332.4	332.1
122.5°	363.3	362.9	362.5	362.1
125°	393.7	393.2	392.6	392.0
127.5°	423.7	423.1	422.5	422.0
130°	454.3	453.3	452.3	451.3
132.5°	484.0	483.3	482.6	481.9
135°	514.6	514.3	514.1	513.8
137.5°	543.1	542.7	542.2	541.8
140°	572.2	571.2	570.2	569.2
142.5°	599.4	598.7	598.0	597.3
145°	625.7	625.2	624.6	624.0
147.5°	650.8	650.0	649.1	648.3
150°	673.8	672.9	672.1	671.2
152.5°	695.7	694.9	694.2	693.5
155°	716.3	715.3	714.3	713.3
157.5°	734.3	733.5	732.6	731.8
160°	751.3	750.8	750.2	749.6
162.5°	766.0	765.0	764.0	763.0
165°	778.7	777.7	776.7	775.8
167.5°	789.8	788.9	788.1	787.2
170°	798.5	797.5	796.5	795.5
172.5°	804.9	803.9	802.9	801.9
175°	809.3	808.3	807.3	806.4
177.5°	811.9	810.9	809.9	808.9
180°	811.5	811.5	811.5	811.5



TEST NUMBER: P832159

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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	7.04	7.75	8.13	8.83	10.30	11.70	12.41	12.79	13.49	14.97
	3H	8.25	8.88	9.35	9.97	11.47	13.19	13.83	14.29	14.91	16.41
	4H	8.63	9.23	9.74	10.32	11.82	13.68	14.28	14.78	15.37	16.87
	6H	8.90	9.45	10.02	10.55	12.06	13.98	14.53	15.10	15.63	17.14
	8H	8.99	9.51	10.11	10.62	12.12	14.06	14.58	15.18	15.69	17.19
	12H	9.04	9.53	10.16	10.63	12.16	14.09	14.58	15.21	15.69	17.21
4H	2H	7.75	8.35	8.86	9.44	10.94	11.68	12.28	12.80	13.37	14.87
	3H	9.11	9.60	10.23	10.72	12.23	13.33	13.83	14.45	14.95	16.46
	4H	9.56	10.01	10.68	11.12	12.65	13.93	14.39	15.06	15.50	17.03
	6H	9.92	10.31	11.05	11.44	12.96	14.37	14.76	15.49	15.88	17.41
	8H	10.04	10.41	11.17	11.53	13.07	14.49	14.86	15.62	15.98	17.52
	12H	10.11	10.44	11.26	11.58	13.12	14.55	14.88	15.70	16.01	17.56
8H	4H	9.86	10.23	10.99	11.35	12.89	13.89	14.26	15.02	15.38	16.92
	6H	10.32	10.62	11.47	11.79	13.32	14.39	14.69	15.53	15.85	17.39
	8H	10.52	10.78	11.67	11.92	13.48	14.57	14.83	15.73	15.98	17.53
	12H	10.65	10.88	11.81	12.02	13.62	14.68	14.91	15.84	16.05	17.64
12H	4H	9.87	10.20	11.01	11.33	12.88	13.84	14.17	14.98	15.30	16.84
	6H	10.38	10.64	11.54	11.79	13.34	14.36	14.62	15.51	15.76	17.32
	8H	10.59	10.82	11.75	11.96	13.56	14.55	14.78	15.71	15.92	17.51