

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: P831562

Luminaire Tested: S123DIP-S560D805U835-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831562
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U835-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

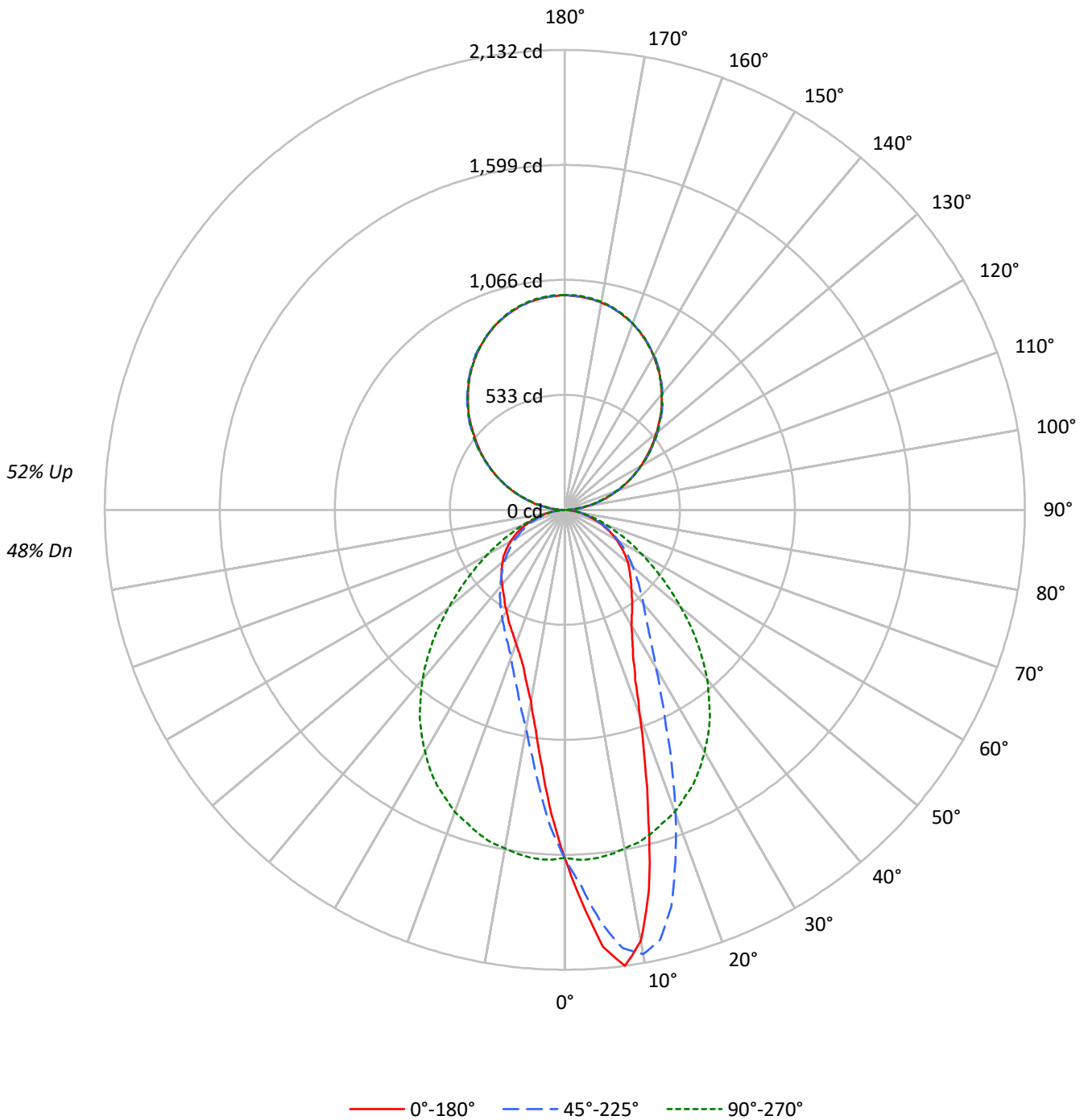
Lumens per Lamp: N/A
Luminaire Lumens: 5354.6 lumens
Efficiency: N/A
Efficacy: 133.2 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.2
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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	98	94	90	87	90	87	83	81	73	71	69	61	59	58	49	48	47				42	
2	90	83	77	72	82	76	71	67	65	61	58	54	51	49	44	42	41				36	
3	82	73	66	60	75	68	62	57	58	53	49	48	45	42	39	37	35				31	
4	75	65	58	52	69	60	54	49	52	47	43	43	40	37	36	33	31				27	
5	70	58	51	45	64	54	47	42	47	41	37	39	35	32	33	30	27				24	
6	64	53	45	39	59	49	42	37	42	37	33	36	32	29	30	27	25				22	
7	60	48	40	35	55	45	38	33	39	33	29	33	29	26	28	24	22				20	
8	56	44	36	31	51	41	34	29	35	30	26	30	26	23	25	22	20				18	
9	52	40	33	28	48	38	31	27	33	27	24	28	24	21	24	21	18				16	
10	49	37	30	25	45	35	28	24	30	25	22	26	22	19	22	19	17				15	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	17374	17374	17374	17374	17374
5°	21973	20738	17530	14126	12981
10°	22186	22857	17413	11261	9840
15°	16710	21222	17295	9536	8322
20°	11643	17172	17073	8339	7559
25°	8878	13206	16697	7672	7090
30°	7680	10491	16096	7201	6712
35°	7126	8858	15403	6861	6447
40°	6746	7946	14429	6535	6357
45°	6521	7354	13192	6282	6317
50°	6409	6886	11727	6052	6285
55°	6170	6544	10290	5833	6311
60°	5950	6176	8869	5627	6209
65°	5591	5827	7651	5407	6085
70°	5161	5385	6505	5045	5728
75°	4675	4828	5577	4687	5232
80°	3856	4228	4413	4085	4413
85°	3051	3421	3236	3470	3520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 15061 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.6	2.8
10°-20°	379.6	7.1
20°-30°	449.5	8.4
30°-40°	452.0	8.4
40°-50°	414.7	7.7
50°-60°	342.3	6.4
60°-70°	242.1	4.5
70°-80°	129.2	2.4
80°-90°	34.9	0.7
90°-100°	64.1	1.2
100°-110°	193.9	3.6
110°-120°	330.1	6.2
120°-130°	434.3	8.1
130°-140°	488.2	9.1
140°-150°	479.9	9.0
150°-160°	404.0	7.5
160°-170°	269.0	5.0
170°-180°	94.2	1.8
0°-30°	981.7	18.3
0°-40°	1433.7	26.8
0°-60°	2190.6	40.9
0°-90°	2596.8	48.5
90°-120°	588.1	11.0
90°-150°	1990.5	37.2
90°-180°	2758.0	51.5
0°-180°	5354.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1614	1614	1614	1614	1614	
5°	2034	1919	1622	1307	1201	194
15°	1500	1904	1552	856	747	414
25°	748	1112	1406	646	597	353
35°	542	674	1172	522	491	341
45°	428	483	867	413	415	332
55°	329	349	548	311	336	294
65°	220	229	300	212	239	218
75°	112	116	134	113	126	118
85°	25	28	26	28	28	28
90°	24	19	1	19	24	13
95°	61	58	46	58	61	61
105°	186	184	176	184	186	197
115°	333	333	332	333	333	330
125°	481	487	486	487	481	430
135°	630	635	631	635	630	485
145°	765	769	765	769	765	478
155°	875	877	876	877	875	403
165°	952	952	955	952	952	269
175°	989	990	993	990	989	94
180°	995	995	995	995	995	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1
2.5°	1819.3	1817.5	1815.6	1806.2	1796.9	1792.4	1787.9	1774.4	1760.9	1745.9	1731.0
5°	2033.6	2038.8	2044.1	2038.1	2032.1	2013.7	1995.4	1971.0	1946.7	1919.3	1892.0
7.5°	2132.4	2135.4	2138.4	2134.7	2130.9	2126.1	2121.2	2099.5	2077.8	2049.7	2021.6
10°	2029.8	2036.6	2043.3	2057.9	2072.5	2089.0	2105.5	2102.5	2099.5	2091.2	2083.0
12.5°	1804.4	1812.6	1820.8	1850.1	1879.3	1916.7	1954.2	1986.4	2018.6	2041.1	2063.5
15°	1499.5	1522.4	1545.2	1571.8	1598.4	1653.4	1708.5	1776.3	1844.1	1904.4	1964.7
17.5°	1235.1	1243.7	1252.3	1280.8	1309.3	1378.6	1447.8	1526.1	1604.4	1704.4	1804.4
20°	1016.4	1024.3	1032.1	1069.6	1107.0	1161.3	1215.6	1303.7	1391.7	1499.1	1606.6
22.5°	853.9	866.2	878.6	899.6	920.5	972.6	1024.6	1102.9	1181.2	1299.9	1418.6
25°	747.5	756.5	765.5	778.2	791.0	832.5	874.1	938.5	1002.9	1111.9	1220.9
27.5°	674.9	678.6	682.3	695.1	707.8	734.8	761.7	817.2	872.6	965.1	1057.6
30°	617.9	620.6	623.2	634.4	645.6	664.0	682.3	722.4	762.5	844.1	925.8
32.5°	578.2	580.1	582.0	590.6	599.2	612.3	625.4	654.6	683.8	751.3	818.7
35°	542.3	543.4	544.5	550.9	557.3	567.0	576.7	598.8	620.9	674.1	727.3
37.5°	510.8	512.3	513.8	517.6	521.3	529.9	538.5	556.1	573.7	614.6	655.4
40°	480.1	482.7	485.4	488.0	490.6	497.7	504.8	518.3	531.8	565.5	599.2
42.5°	453.9	456.5	459.1	460.3	461.4	465.5	469.6	482.0	494.3	519.4	544.5
45°	428.4	429.6	430.7	431.8	432.9	436.3	439.7	450.5	461.4	483.1	504.8
47.5°	405.2	405.2	405.2	406.0	406.7	409.7	412.7	420.6	428.4	445.3	462.1
50°	382.7	382.7	382.7	381.6	380.5	382.4	384.2	390.2	396.2	411.2	426.2
52.5°	355.8	355.8	355.8	356.2	356.5	356.5	356.5	361.8	367.0	380.5	394.0
55°	328.8	330.3	331.8	330.7	329.6	330.3	331.1	334.4	337.8	348.7	359.5
57.5°	301.9	302.6	303.3	303.0	302.6	303.0	303.3	306.3	309.3	317.6	325.8
60°	276.4	276.4	276.4	275.6	274.9	275.6	276.4	277.9	279.4	286.9	294.4
62.5°	247.9	248.3	248.7	249.0	249.4	248.7	247.9	249.8	251.7	257.3	262.9
65°	219.5	219.8	220.2	221.3	222.5	221.7	221.0	222.8	224.7	228.8	232.9
67.5°	194.0	193.2	192.5	192.9	193.2	194.4	195.5	195.9	196.2	200.7	205.2
70°	164.0	164.8	165.5	165.2	164.8	165.2	165.5	166.7	167.8	171.1	174.5
72.5°	137.1	137.4	137.8	137.8	137.8	138.6	139.3	140.4	141.6	143.4	145.3
75°	112.4	112.4	112.4	113.1	113.8	114.2	114.6	114.6	114.6	116.1	117.6
77.5°	85.4	87.3	89.1	88.8	88.4	89.1	89.9	91.0	92.1	92.9	93.6
80°	62.2	62.2	62.2	62.5	62.9	64.0	65.2	65.9	66.7	68.2	69.7
82.5°	39.7	40.1	40.4	41.6	42.7	43.4	44.2	45.3	46.4	46.4	46.4
85°	24.7	24.0	23.2	24.0	24.7	25.5	26.2	26.6	27.0	27.7	28.5
87.5°	12.0	12.0	12.0	12.0	12.0	12.4	12.7	12.7	12.7	12.7	12.7
90°	23.5	23.1	22.8	22.4	22.1	21.5	20.8	20.2	19.5	18.8	16.5
92.5°	33.6	34.0	34.3	34.7	35.0	34.9	34.4	33.9	33.4	32.8	31.8
95°	61.0	61.0	61.0	61.0	61.0	60.6	59.9	59.2	58.6	57.9	56.5
97.5°	87.6	87.7	87.9	88.1	88.3	87.9	87.0	86.2	85.3	84.4	83.4
100°	118.8	118.5	118.1	117.8	117.5	117.0	116.5	116.0	115.5	114.9	114.1
102.5°	150.9	151.1	151.2	151.4	151.6	151.4	150.9	150.4	149.9	149.3	148.1
105°	186.1	185.7	185.4	185.0	184.7	184.5	184.5	184.5	184.5	184.5	183.0
107.5°	222.0	222.2	222.4	222.6	222.7	222.6	222.0	221.5	221.0	220.5	219.8
110°	258.8	259.1	259.5	259.8	260.2	260.0	259.3	258.6	257.9	257.2	256.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.9	297.9	297.9	297.9	297.9	297.4	296.6	295.7	294.8	294.0	294.0
115°	333.1	333.2	333.4	333.6	333.8	333.8	333.6	333.4	333.2	333.1	333.4
117.5°	369.0	369.6	370.1	370.6	371.1	371.4	371.4	371.4	371.4	371.4	371.7
120°	407.3	407.7	408.0	408.4	408.7	409.0	409.2	409.3	409.5	409.7	410.6
122.5°	444.1	444.6	445.1	445.7	446.2	446.7	447.2	447.7	448.3	448.8	449.1
125°	480.8	481.5	482.2	482.9	483.6	484.3	485.0	485.7	486.4	487.1	487.4
127.5°	517.6	518.3	519.0	519.7	520.4	521.2	522.3	523.3	524.4	525.4	525.7
130°	553.5	554.8	556.0	557.2	558.4	559.4	560.1	560.8	561.4	562.1	562.7
132.5°	591.1	591.9	592.8	593.7	594.5	595.4	596.3	597.2	598.0	598.9	599.2
135°	630.2	630.5	630.9	631.2	631.6	632.1	632.8	633.5	634.2	634.9	635.0
137.5°	664.6	665.1	665.6	666.1	666.7	667.3	668.2	669.1	670.0	670.8	670.3
140°	698.2	699.4	700.6	701.8	703.1	703.7	703.9	704.1	704.3	704.4	704.3
142.5°	732.6	733.5	734.3	735.2	736.1	736.6	736.8	736.9	737.1	737.3	736.9
145°	765.4	766.1	766.8	767.5	768.2	768.6	768.8	769.0	769.2	769.3	768.8
147.5°	795.1	796.2	797.2	798.3	799.3	799.8	799.8	799.8	799.8	799.8	799.3
150°	823.3	824.3	825.4	826.4	827.5	828.0	828.0	828.0	828.0	828.0	827.6
152.5°	850.6	851.5	852.4	853.3	854.1	854.4	854.0	853.7	853.3	853.0	852.8
155°	874.9	876.1	877.3	878.5	879.7	880.0	879.3	878.6	877.9	877.2	877.1
157.5°	897.6	898.6	899.6	900.7	901.7	901.9	901.2	900.5	899.8	899.1	898.9
160°	919.4	920.1	920.8	921.5	922.2	922.1	921.3	920.4	919.5	918.7	918.7
162.5°	935.9	937.1	938.3	939.5	940.7	940.9	940.0	939.2	938.3	937.4	937.3
165°	951.5	952.7	953.9	955.2	956.4	956.5	955.4	954.4	953.3	952.3	952.3
167.5°	965.6	966.6	967.7	968.7	969.7	969.7	968.7	967.7	966.6	965.6	965.4
170°	975.7	977.0	978.2	979.4	980.6	980.6	979.4	978.2	977.0	975.7	975.7
172.5°	983.6	984.8	986.0	987.2	988.4	988.5	987.5	986.4	985.4	984.3	984.3
175°	989.0	990.2	991.5	992.7	993.9	994.0	992.9	991.9	990.9	989.8	989.8
177.5°	992.2	993.4	994.6	995.8	997.0	997.1	996.1	995.0	994.0	992.9	992.9
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1
2.5°	1726.5	1722.0	1705.5	1689.0	1670.3	1651.6	1637.7	1623.9	1603.3	1582.7	1565.8
5°	1871.0	1850.1	1815.2	1780.4	1733.2	1686.0	1654.2	1622.4	1579.7	1537.0	1502.9
7.5°	1985.6	1949.7	1901.0	1852.3	1790.5	1728.7	1670.3	1611.9	1546.7	1481.5	1428.4
10°	2058.7	2034.3	1978.1	1922.0	1839.2	1756.4	1674.8	1593.1	1509.3	1425.4	1355.0
12.5°	2065.8	2068.0	2016.3	1964.7	1871.0	1777.4	1678.2	1578.9	1473.3	1367.7	1285.7
15°	2003.2	2041.8	2013.3	1984.9	1890.5	1796.1	1674.0	1552.0	1430.2	1308.5	1213.8
17.5°	1887.1	1969.9	1974.0	1978.1	1883.8	1789.4	1654.2	1519.0	1381.2	1243.4	1143.7
20°	1728.7	1850.8	1892.8	1934.7	1857.9	1781.2	1635.8	1490.5	1336.2	1181.9	1077.5
22.5°	1566.9	1715.2	1792.0	1868.8	1811.9	1754.9	1600.3	1445.6	1282.7	1119.8	1013.8
25°	1382.7	1544.5	1662.4	1780.4	1745.6	1710.7	1558.3	1405.9	1232.5	1059.1	950.9
27.5°	1222.0	1386.4	1528.7	1671.0	1663.6	1656.1	1504.8	1353.5	1175.9	998.4	893.9
30°	1079.0	1232.1	1391.3	1550.5	1568.8	1587.2	1441.1	1295.0	1117.2	939.3	838.5
32.5°	952.4	1086.1	1256.8	1427.6	1463.6	1499.5	1367.7	1235.9	1059.9	883.8	786.8
35°	848.6	970.0	1140.7	1311.5	1356.5	1401.4	1286.8	1172.2	1000.7	829.2	736.7
37.5°	756.9	858.4	1025.0	1191.7	1246.7	1301.8	1199.2	1096.6	935.9	775.2	690.2
40°	680.9	762.5	915.7	1068.8	1132.5	1196.2	1111.5	1026.9	874.5	722.0	643.8
42.5°	617.2	689.8	828.8	967.7	1028.8	1089.8	1018.3	946.8	811.2	675.6	604.1
45°	562.9	620.9	747.1	873.3	931.4	989.4	928.0	866.6	747.1	627.7	561.0
47.5°	511.9	561.8	669.6	777.5	829.2	880.8	832.9	785.0	683.8	582.7	522.4
50°	466.3	506.3	600.7	695.1	740.0	785.0	742.6	700.3	617.2	534.0	481.6
52.5°	426.6	459.1	538.2	617.2	655.8	694.3	658.0	621.7	555.8	489.9	444.2
55°	387.2	415.0	483.5	552.0	578.2	604.5	576.4	548.3	495.1	441.9	403.3
57.5°	350.5	375.3	431.4	487.6	507.8	528.1	502.6	477.1	437.0	397.0	364.8
60°	314.6	334.8	381.6	428.4	440.8	453.2	432.6	412.0	383.9	355.8	326.9
62.5°	281.3	299.6	334.4	369.3	377.5	385.7	370.0	354.3	332.9	311.6	289.1
65°	246.8	260.7	289.1	317.6	322.8	328.1	314.2	300.4	284.2	268.1	251.7
67.5°	215.0	224.7	247.9	271.1	271.5	271.9	260.7	249.4	240.4	231.4	218.3
70°	183.9	193.2	208.6	224.0	224.3	224.7	215.7	206.7	200.0	193.2	183.5
72.5°	152.0	158.8	170.4	182.0	181.3	180.5	174.9	169.3	164.0	158.8	151.7
75°	123.2	128.8	136.7	144.6	142.3	140.1	137.1	134.1	129.6	125.1	120.6
77.5°	97.0	100.4	104.9	109.4	107.9	106.4	103.7	101.1	97.7	94.4	92.5
80°	71.2	72.7	75.7	78.6	77.9	77.1	74.2	71.2	70.4	69.7	67.0
82.5°	48.3	50.2	50.9	51.7	51.3	50.9	48.7	46.4	45.7	44.9	44.6
85°	28.8	29.2	29.6	30.0	28.8	27.7	27.0	26.2	26.2	26.2	25.8
87.5°	13.1	13.5	13.5	13.5	13.1	12.7	12.0	11.2	11.6	12.0	12.0
90°	14.2	12.0	9.7	7.7	6.0	4.3	2.5	0.8	2.5	4.3	6.0
92.5°	30.8	29.7	28.7	27.6	26.6	25.5	24.5	23.5	24.5	25.5	26.6
95°	55.1	53.7	52.3	51.0	49.8	48.6	47.3	46.1	47.3	48.6	49.8
97.5°	82.4	81.3	80.3	79.3	78.4	77.6	76.7	75.8	76.7	77.6	78.4
100°	113.2	112.3	111.5	110.5	109.5	108.4	107.4	106.3	107.4	108.4	109.5
102.5°	146.9	145.7	144.5	143.6	143.1	142.6	142.0	141.5	142.0	142.6	143.1
105°	181.4	179.8	178.3	177.3	177.0	176.6	176.3	175.9	176.3	176.6	177.0
107.5°	219.1	218.4	217.7	217.3	217.1	216.9	216.7	216.6	216.7	216.9	217.1
110°	256.5	256.2	255.8	255.5	255.1	254.8	254.4	254.1	254.4	254.8	255.1



TEST NUMBER: P831562

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	294.0	294.0	294.0	293.9	293.7	293.5	293.4	293.2	293.4	293.5	293.7
115°	333.8	334.1	334.5	334.4	333.8	333.3	332.8	332.3	332.8	333.3	333.8
117.5°	372.1	372.4	372.8	372.9	372.7	372.5	372.3	372.2	372.3	372.5	372.7
120°	411.4	412.3	413.2	413.1	412.0	411.0	409.9	408.9	409.9	411.0	412.0
122.5°	449.5	449.8	450.2	450.0	449.3	448.6	447.9	447.2	447.9	448.6	449.3
125°	487.8	488.1	488.5	488.4	487.9	487.3	486.8	486.3	486.8	487.3	487.9
127.5°	526.1	526.4	526.8	526.4	525.4	524.4	523.3	522.3	523.3	524.4	525.4
130°	563.2	563.7	564.2	563.8	562.4	561.0	559.6	558.2	559.6	561.0	562.4
132.5°	599.6	599.9	600.3	599.8	598.4	597.0	595.6	594.2	595.6	597.0	598.4
135°	635.2	635.4	635.6	635.1	634.1	633.0	632.0	630.9	632.0	633.0	634.1
137.5°	669.8	669.3	668.7	668.0	667.2	666.3	665.4	664.6	665.4	666.3	667.2
140°	704.1	703.9	703.7	703.2	702.4	701.5	700.6	699.7	700.6	701.5	702.4
142.5°	736.6	736.2	735.9	735.3	734.4	733.5	732.7	731.8	732.7	733.5	734.4
145°	768.3	767.8	767.2	766.8	766.5	766.1	765.8	765.4	765.8	766.1	766.5
147.5°	798.8	798.3	797.7	797.1	796.4	795.7	795.0	794.4	795.0	795.7	796.4
150°	827.3	826.9	826.6	826.2	825.9	825.5	825.2	824.8	825.2	825.5	825.9
152.5°	852.6	852.5	852.3	851.9	851.4	850.9	850.4	849.9	850.4	850.9	851.4
155°	876.9	876.7	876.5	876.4	876.4	876.4	876.4	876.4	876.4	876.4	876.4
157.5°	898.8	898.6	898.4	898.4	898.6	898.8	898.9	899.1	898.9	898.8	898.6
160°	918.7	918.7	918.7	918.8	919.2	919.5	919.9	920.2	919.9	919.5	919.2
162.5°	937.1	936.9	936.7	936.9	937.4	938.0	938.5	939.0	938.5	938.0	937.4
165°	952.3	952.3	952.3	952.5	953.1	953.6	954.1	954.6	954.1	953.6	953.1
167.5°	965.2	965.1	964.9	965.1	965.8	966.5	967.2	967.9	967.2	966.5	965.8
170°	975.7	975.7	975.7	976.1	976.8	977.5	978.2	978.9	978.2	977.5	976.8
172.5°	984.3	984.3	984.3	984.7	985.4	986.1	986.8	987.5	986.8	986.1	985.4
175°	989.8	989.8	989.8	990.2	990.9	991.6	992.2	992.9	992.2	991.6	990.9
177.5°	992.9	992.9	992.9	993.3	994.0	994.7	995.4	996.1	995.4	994.7	994.0
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



TEST NUMBER: P831562

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1	1614.1
2.5°	1549.0	1534.4	1519.7	1508.5	1497.3	1478.2	1459.1	1454.6	1450.1	1443.7	1437.4
5°	1468.8	1432.9	1396.9	1364.7	1332.5	1307.4	1282.3	1265.8	1249.4	1237.4	1225.4
7.5°	1375.2	1321.3	1267.3	1229.1	1190.9	1154.6	1118.3	1106.7	1095.1	1079.3	1063.6
10°	1284.6	1225.0	1165.5	1115.7	1065.8	1030.3	994.7	980.5	966.2	946.4	926.5
12.5°	1203.7	1138.5	1073.3	1023.2	973.0	938.5	904.1	883.5	862.9	851.6	840.4
15°	1119.0	1049.4	979.7	933.3	886.8	855.7	824.7	806.7	788.7	777.8	767.0
17.5°	1044.1	975.2	906.3	861.7	817.2	788.7	760.2	744.5	728.8	720.5	712.3
20°	973.0	905.6	838.1	794.7	751.3	728.0	704.8	694.7	684.6	677.9	671.1
22.5°	907.8	841.5	775.2	738.2	701.1	682.3	663.6	656.5	649.4	643.8	638.2
25°	842.6	783.5	724.3	692.8	661.4	646.0	630.7	623.6	616.4	610.8	605.2
27.5°	789.5	732.9	676.4	649.4	622.4	610.4	598.5	592.8	587.2	582.0	576.7
30°	737.8	687.2	636.7	613.4	590.2	579.4	568.5	562.9	557.3	552.4	547.5
32.5°	689.8	646.4	603.0	581.6	560.3	551.3	542.3	535.5	528.8	525.1	521.3
35°	644.2	605.2	566.3	548.7	531.0	522.1	513.1	507.5	501.8	498.8	495.8
37.5°	605.2	570.4	535.5	518.7	501.8	493.2	484.6	479.7	474.9	473.7	472.6
40°	565.5	535.5	505.6	489.1	472.6	465.1	457.6	454.7	451.7	450.9	450.2
42.5°	532.5	503.3	474.1	459.1	444.2	437.8	431.4	429.9	428.4	429.6	430.7
45°	494.3	470.0	445.7	431.8	417.9	412.7	407.5	406.3	405.2	407.5	409.7
47.5°	462.1	439.7	417.2	404.1	391.0	387.2	383.5	383.1	382.7	385.7	388.7
50°	429.2	407.5	385.7	375.3	364.8	361.4	358.0	359.2	360.3	365.1	370.0
52.5°	398.5	378.3	358.0	348.3	338.6	336.3	334.1	336.7	339.3	344.5	349.8
55°	364.8	346.4	328.1	320.6	313.1	310.8	308.6	313.8	319.1	323.9	328.8
57.5°	332.6	316.5	300.4	293.6	286.9	286.5	286.1	291.0	295.9	301.1	306.3
60°	298.1	284.6	271.1	265.9	260.7	261.4	262.2	267.8	273.4	277.5	281.6
62.5°	266.6	255.4	244.2	239.3	234.4	236.3	238.2	243.8	249.4	254.3	259.2
65°	235.2	225.8	216.5	213.1	209.7	212.3	215.0	219.8	224.7	228.1	231.4
67.5°	205.2	197.4	189.5	186.9	184.3	186.9	189.5	194.4	199.2	202.6	206.0
70°	173.8	167.4	161.0	159.2	157.3	160.3	163.3	167.4	171.5	174.9	178.3
72.5°	144.6	139.7	134.8	134.4	134.1	136.7	139.3	143.4	147.6	149.8	152.0
75°	116.1	113.5	110.9	110.5	110.1	112.7	115.3	117.6	119.8	121.7	123.6
77.5°	90.6	88.4	86.1	86.5	86.9	88.8	90.6	92.9	95.1	96.2	97.4
80°	64.4	63.7	62.9	63.7	64.4	65.9	67.4	68.9	70.4	71.2	71.9
82.5°	44.2	43.4	42.7	43.8	44.9	46.1	47.2	48.3	49.4	49.8	50.2
85°	25.5	26.6	27.7	27.7	27.7	28.1	28.5	28.8	29.2	28.8	28.5
87.5°	12.0	12.4	12.7	12.7	12.7	13.1	13.5	13.5	13.5	13.1	12.7
90°	7.7	9.7	12.0	14.2	16.5	18.8	19.5	20.2	20.8	21.5	22.1
92.5°	27.6	28.7	29.7	30.8	31.8	32.8	33.4	33.9	34.4	34.9	35.0
95°	51.0	52.3	53.7	55.1	56.5	57.9	58.6	59.2	59.9	60.6	61.0
97.5°	79.3	80.3	81.3	82.4	83.4	84.4	85.3	86.2	87.0	87.9	88.3
100°	110.5	111.5	112.3	113.2	114.1	114.9	115.5	116.0	116.5	117.0	117.5
102.5°	143.6	144.5	145.7	146.9	148.1	149.3	149.9	150.4	150.9	151.4	151.6
105°	177.3	178.3	179.8	181.4	183.0	184.5	184.5	184.5	184.5	184.5	184.7
107.5°	217.3	217.7	218.4	219.1	219.8	220.5	221.0	221.5	222.0	222.6	222.7
110°	255.5	255.8	256.2	256.5	256.9	257.2	257.9	258.6	259.3	260.0	260.2



TEST NUMBER: P831562

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	293.9	294.0	294.0	294.0	294.0	294.0	294.8	295.7	296.6	297.4	297.9
115°	334.4	334.5	334.1	333.8	333.4	333.1	333.2	333.4	333.6	333.8	333.8
117.5°	372.9	372.8	372.4	372.1	371.7	371.4	371.4	371.4	371.4	371.4	371.1
120°	413.1	413.2	412.3	411.4	410.6	409.7	409.5	409.3	409.2	409.0	408.7
122.5°	450.0	450.2	449.8	449.5	449.1	448.8	448.3	447.7	447.2	446.7	446.2
125°	488.4	488.5	488.1	487.8	487.4	487.1	486.4	485.7	485.0	484.3	483.6
127.5°	526.4	526.8	526.4	526.1	525.7	525.4	524.4	523.3	522.3	521.2	520.4
130°	563.8	564.2	563.7	563.2	562.7	562.1	561.4	560.8	560.1	559.4	558.4
132.5°	599.8	600.3	599.9	599.6	599.2	598.9	598.0	597.2	596.3	595.4	594.5
135°	635.1	635.6	635.4	635.2	635.0	634.9	634.2	633.5	632.8	632.1	631.6
137.5°	668.0	668.7	669.3	669.8	670.3	670.8	670.0	669.1	668.2	667.3	666.7
140°	703.2	703.7	703.9	704.1	704.3	704.4	704.3	704.1	703.9	703.7	703.1
142.5°	735.3	735.9	736.2	736.6	736.9	737.3	737.1	736.9	736.8	736.6	736.1
145°	766.8	767.2	767.8	768.3	768.8	769.3	769.2	769.0	768.8	768.6	768.2
147.5°	797.1	797.7	798.3	798.8	799.3	799.8	799.8	799.8	799.8	799.8	799.3
150°	826.2	826.6	826.9	827.3	827.6	828.0	828.0	828.0	828.0	828.0	827.5
152.5°	851.9	852.3	852.5	852.6	852.8	853.0	853.3	853.7	854.0	854.4	854.1
155°	876.4	876.5	876.7	876.9	877.1	877.2	877.9	878.6	879.3	880.0	879.7
157.5°	898.4	898.4	898.6	898.8	898.9	899.1	899.8	900.5	901.2	901.9	901.7
160°	918.8	918.7	918.7	918.7	918.7	918.7	919.5	920.4	921.3	922.1	922.2
162.5°	936.9	936.7	936.9	937.1	937.3	937.4	938.3	939.2	940.0	940.9	940.7
165°	952.5	952.3	952.3	952.3	952.3	952.3	953.3	954.4	955.4	956.5	956.4
167.5°	965.1	964.9	965.1	965.2	965.4	965.6	966.6	967.7	968.7	969.7	969.7
170°	976.1	975.7	975.7	975.7	975.7	975.7	977.0	978.2	979.4	980.6	980.6
172.5°	984.7	984.3	984.3	984.3	984.3	984.3	985.4	986.4	987.5	988.5	988.4
175°	990.2	989.8	989.8	989.8	989.8	989.8	990.9	991.9	992.9	994.0	993.9
177.5°	993.3	992.9	992.9	992.9	992.9	992.9	994.0	995.0	996.1	997.1	997.0
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



TEST NUMBER: P831562

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1614.1	1614.1	1614.1	1614.1
2.5°	1434.7	1432.1	1421.6	1411.1
5°	1216.4	1207.4	1204.4	1201.4
7.5°	1062.8	1062.1	1046.4	1030.6
10°	927.7	928.8	914.5	900.3
12.5°	831.0	821.7	820.5	819.4
15°	758.4	749.8	748.3	746.8
17.5°	707.1	701.8	700.3	698.8
20°	668.1	665.1	662.5	659.9
22.5°	634.4	630.7	628.4	626.2
25°	601.8	598.5	597.7	597.0
27.5°	572.6	568.5	568.5	568.5
30°	544.9	542.3	541.2	540.0
32.5°	519.1	516.8	516.8	516.8
35°	494.7	493.6	492.1	490.6
37.5°	472.6	472.6	471.9	471.1
40°	451.3	452.4	452.4	452.4
42.5°	431.8	432.9	432.9	432.9
45°	411.6	413.5	414.2	415.0
47.5°	391.7	394.7	395.5	396.2
50°	372.3	374.5	374.9	375.3
52.5°	352.4	355.0	356.9	358.8
55°	331.4	334.1	335.2	336.3
57.5°	309.0	311.6	312.0	312.3
60°	284.2	286.9	287.6	288.4
62.5°	260.7	262.2	262.9	263.7
65°	233.7	235.9	237.4	238.9
67.5°	207.9	209.7	209.7	209.7
70°	179.0	179.8	180.9	182.0
72.5°	152.4	152.8	152.8	152.8
75°	124.3	125.1	125.5	125.8
77.5°	97.7	98.1	98.1	98.1
80°	71.5	71.2	71.2	71.2
82.5°	49.1	47.9	47.9	47.9
85°	28.1	27.7	28.1	28.5
87.5°	12.7	12.7	12.7	12.7
90°	22.4	22.8	23.1	23.5
92.5°	34.7	34.3	34.0	33.6
95°	61.0	61.0	61.0	61.0
97.5°	88.1	87.9	87.7	87.6
100°	117.8	118.1	118.5	118.8
102.5°	151.4	151.2	151.1	150.9
105°	185.0	185.4	185.7	186.1
107.5°	222.6	222.4	222.2	222.0
110°	259.8	259.5	259.1	258.8



TEST NUMBER: P831562

CATALOG NUMBER: S123DIP-S560D805U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	297.9	297.9	297.9	297.9
115°	333.6	333.4	333.2	333.1
117.5°	370.6	370.1	369.6	369.0
120°	408.4	408.0	407.7	407.3
122.5°	445.7	445.1	444.6	444.1
125°	482.9	482.2	481.5	480.8
127.5°	519.7	519.0	518.3	517.6
130°	557.2	556.0	554.8	553.5
132.5°	593.7	592.8	591.9	591.1
135°	631.2	630.9	630.5	630.2
137.5°	666.1	665.6	665.1	664.6
140°	701.8	700.6	699.4	698.2
142.5°	735.2	734.3	733.5	732.6
145°	767.5	766.8	766.1	765.4
147.5°	798.3	797.2	796.2	795.1
150°	826.4	825.4	824.3	823.3
152.5°	853.3	852.4	851.5	850.6
155°	878.5	877.3	876.1	874.9
157.5°	900.7	899.6	898.6	897.6
160°	921.5	920.8	920.1	919.4
162.5°	939.5	938.3	937.1	935.9
165°	955.2	953.9	952.7	951.5
167.5°	968.7	967.7	966.6	965.6
170°	979.4	978.2	977.0	975.7
172.5°	987.2	986.0	984.8	983.6
175°	992.7	991.5	990.2	989.0
177.5°	995.8	994.6	993.4	992.2
180°	995.3	995.3	995.3	995.3



TEST NUMBER: P831562

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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	13.34	14.16	14.32	15.14	16.44	15.58	16.39	16.56	17.38	18.67
	3H	14.99	15.72	15.98	16.71	18.03	17.00	17.73	17.99	18.72	20.04
	4H	15.56	16.25	16.56	17.25	18.58	17.45	18.14	18.45	19.14	20.46
	6H	15.93	16.57	16.94	17.57	18.91	17.72	18.36	18.73	19.36	20.70
	8H	16.03	16.63	17.04	17.65	18.98	17.78	18.39	18.80	19.41	20.74
	12H	16.07	16.64	17.09	17.66	19.01	17.80	18.38	18.82	19.39	20.75
4H	2H	13.91	14.60	14.92	15.60	16.93	15.74	16.43	16.75	17.43	18.75
	3H	15.74	16.31	16.75	17.34	18.68	17.35	17.93	18.37	18.95	20.29
	4H	16.43	16.96	17.46	17.98	19.34	17.93	18.46	18.96	19.48	20.84
	6H	16.91	17.36	17.94	18.40	19.76	18.34	18.79	19.37	19.83	21.19
	8H	17.04	17.46	18.08	18.50	19.87	18.45	18.87	19.48	19.90	21.28
	12H	17.11	17.49	18.16	18.54	19.92	18.49	18.87	19.54	19.92	21.30
8H	4H	16.70	17.12	17.73	18.15	19.53	18.04	18.46	19.07	19.49	20.87
	6H	17.28	17.63	18.34	18.71	20.08	18.54	18.88	19.60	19.96	21.33
	8H	17.49	17.80	18.56	18.86	20.25	18.72	19.02	19.78	20.08	21.47
	12H	17.61	17.88	18.68	18.94	20.37	18.82	19.08	19.89	20.14	21.57
12H	4H	16.70	17.08	17.75	18.13	19.50	18.01	18.39	19.06	19.44	20.82
	6H	17.33	17.64	18.40	18.70	20.09	18.55	18.86	19.62	19.92	21.31
	8H	17.57	17.83	18.64	18.89	20.32	18.75	19.02	19.82	20.07	21.51