

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: P831537

Luminaire Tested: S123DIP-S560D585U840-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831537
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-S560D585U840-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

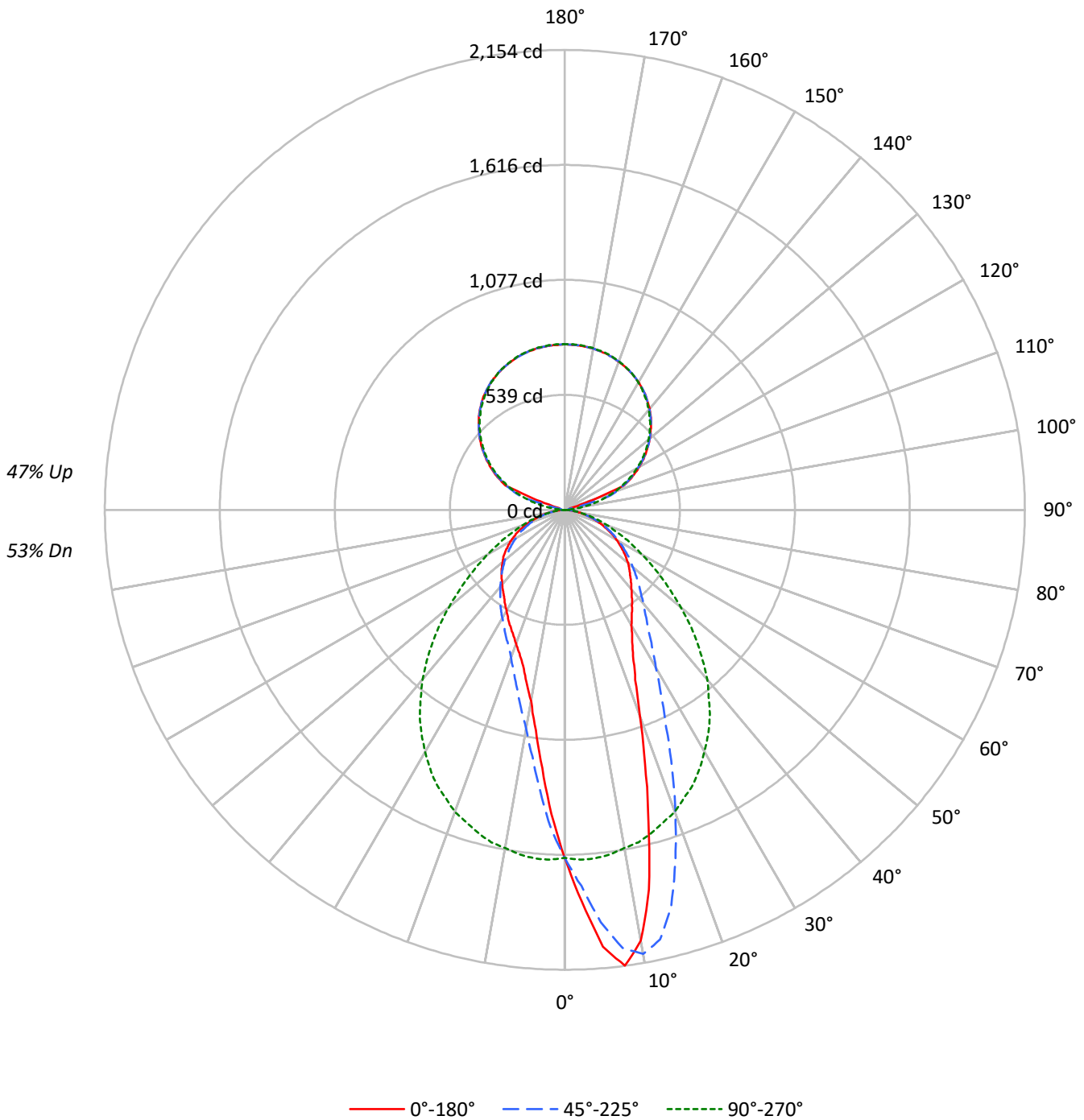
Lumens per Lamp: N/A
Luminaire Lumens: 4985.3 lumens
Efficiency: N/A
Efficacy: 143.3 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 34.8
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	85	85	85	71	71	71	59	59	59	53				
1	99	95	91	88	91	88	85	82	75	73	71	63	62	60	53	51	50	45				
2	91	83	78	73	84	78	72	68	67	63	60	56	54	51	47	45	43	39				
3	83	74	67	61	77	69	63	58	59	55	51	50	47	44	42	40	38	34				
4	76	66	58	53	71	62	55	50	53	48	44	45	42	38	38	35	33	30				
5	70	59	51	46	65	55	48	43	48	43	38	41	37	34	35	32	29	26				
6	65	53	46	40	60	50	43	38	44	38	34	38	33	30	32	29	26	24				
7	60	49	41	35	56	46	39	34	40	34	30	34	30	27	29	26	24	21				
8	56	44	37	32	52	42	35	30	37	31	27	32	28	24	27	24	22	19				
9	53	41	34	29	49	38	32	27	34	28	25	29	25	22	25	22	20	18				
10	49	38	31	26	46	35	29	25	31	26	23	27	23	20	24	21	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	17545	17545	17545	17545	17545
5°	22189	20943	17703	14266	13110
10°	22404	23083	17585	11372	9938
15°	16875	21431	17465	9630	8403
20°	11757	17341	17242	8422	7633
25°	8966	13336	16862	7748	7160
30°	7756	10596	16255	7272	6779
35°	7196	8946	15556	6928	6510
40°	6813	8025	14571	6600	6420
45°	6587	7427	13323	6345	6378
50°	6472	6954	11843	6112	6347
55°	6232	6608	10391	5891	6373
60°	6008	6237	8956	5683	6269
65°	5644	5886	7725	5461	6146
70°	5215	5438	6571	5095	5784
75°	4720	4874	5631	4733	5286
80°	3893	4265	4457	4128	4457
85°	3088	3458	3273	3507	3545

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 15210 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.1	3.1
10°-20°	383.4	7.7
20°-30°	453.9	9.1
30°-40°	456.4	9.2
40°-50°	418.8	8.4
50°-60°	345.6	6.9
60°-70°	244.5	4.9
70°-80°	130.5	2.6
80°-90°	34.7	0.7
90°-100°	27.3	0.5
100°-110°	132.1	2.7
110°-120°	323.9	6.5
120°-130°	411.2	8.2
130°-140°	439.3	8.8
140°-150°	410.8	8.2
150°-160°	331.3	6.6
160°-170°	213.8	4.3
170°-180°	73.7	1.5
0°-30°	991.4	19.9
0°-40°	1447.8	29.0
0°-60°	2212.2	44.4
0°-90°	2621.9	52.6
90°-120°	483.4	9.7
90°-150°	1744.6	35.0
90°-180°	2363.0	47.4
0°-180°	4985.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1630	1630	1630	1630	1630	
5°	2054	1938	1638	1320	1213	196
15°	1514	1923	1567	864	754	418
25°	755	1123	1420	652	603	356
35°	548	681	1184	527	495	344
45°	433	488	875	417	419	335
55°	332	352	554	314	340	297
65°	222	231	303	214	241	220
75°	114	117	135	114	127	119
85°	25	28	26	28	29	28
90°	17	14	1	14	17	9
95°	22	18	35	18	22	18
105°	25	126	172	126	25	53
115°	339	331	322	331	339	319
125°	463	461	454	461	463	414
135°	571	571	565	571	571	440
145°	658	657	652	657	658	411
155°	717	718	718	718	717	331
165°	756	755	757	755	756	213
175°	772	773	775	773	772	74
180°	775	775	775	775	775	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0
2.5°	1837.3	1835.4	1833.5	1824.1	1814.6	1810.1	1805.5	1791.9	1778.3	1763.2	1748.0
5°	2053.6	2058.9	2064.2	2058.2	2052.1	2033.6	2015.1	1990.5	1965.9	1938.3	1910.7
7.5°	2153.5	2156.5	2159.5	2155.7	2152.0	2147.0	2142.1	2120.2	2098.3	2069.9	2041.5
10°	2049.8	2056.7	2063.5	2078.2	2093.0	2109.6	2126.2	2123.2	2120.2	2111.9	2103.6
12.5°	1822.2	1830.5	1838.8	1868.3	1897.8	1935.6	1973.5	2006.0	2038.5	2061.2	2083.9
15°	1514.3	1537.4	1560.5	1587.3	1614.2	1669.8	1725.4	1793.8	1862.3	1923.2	1984.0
17.5°	1247.3	1256.0	1264.7	1293.4	1322.2	1392.2	1462.1	1541.2	1620.2	1721.2	1822.2
20°	1026.4	1034.4	1042.3	1080.1	1118.0	1172.8	1227.6	1316.5	1405.4	1513.9	1622.5
22.5°	862.3	874.8	887.3	908.4	929.6	982.2	1034.8	1113.8	1192.8	1312.7	1432.6
25°	754.9	764.0	773.0	785.9	798.8	840.7	882.7	947.8	1012.8	1122.9	1232.9
27.5°	681.5	685.3	689.1	701.9	714.8	742.0	769.3	825.2	881.2	974.6	1068.0
30°	624.0	626.7	629.3	640.7	652.0	670.5	689.1	729.5	770.0	852.5	934.9
32.5°	583.9	585.8	587.7	596.4	605.1	618.4	631.6	661.1	690.6	758.7	826.7
35°	547.6	548.8	549.9	556.3	562.8	572.6	582.4	604.7	627.1	680.8	734.5
37.5°	515.9	517.4	518.9	522.7	526.5	535.2	543.9	561.6	579.4	620.6	661.9
40°	484.9	487.5	490.1	492.8	495.4	502.6	509.8	523.4	537.0	571.1	605.1
42.5°	458.4	461.0	463.7	464.8	465.9	470.1	474.3	486.7	499.2	524.6	549.9
45°	432.7	433.8	434.9	436.1	437.2	440.6	444.0	455.0	465.9	487.9	509.8
47.5°	409.2	409.2	409.2	410.0	410.7	413.8	416.8	424.7	432.7	449.7	466.7
50°	386.5	386.5	386.5	385.4	384.3	386.1	388.0	394.1	400.1	415.3	430.4
52.5°	359.3	359.3	359.3	359.7	360.0	360.0	360.0	365.3	370.6	384.3	397.9
55°	332.1	333.6	335.1	334.0	332.8	333.6	334.3	337.7	341.1	352.1	363.1
57.5°	304.8	305.6	306.3	306.0	305.6	306.0	306.3	309.4	312.4	320.7	329.0
60°	279.1	279.1	279.1	278.4	277.6	278.4	279.1	280.6	282.1	289.7	297.3
62.5°	250.4	250.7	251.1	251.5	251.9	251.1	250.4	252.3	254.2	259.8	265.5
65°	221.6	222.0	222.4	223.5	224.7	223.9	223.1	225.0	226.9	231.1	235.2
67.5°	195.9	195.2	194.4	194.8	195.2	196.3	197.4	197.8	198.2	202.7	207.3
70°	165.7	166.4	167.2	166.8	166.4	166.8	167.2	168.3	169.4	172.8	176.2
72.5°	138.4	138.8	139.2	139.2	139.2	139.9	140.7	141.8	143.0	144.9	146.7
75°	113.5	113.5	113.5	114.2	115.0	115.4	115.7	115.7	115.7	117.2	118.8
77.5°	86.2	88.1	90.0	89.6	89.3	90.0	90.8	91.9	93.0	93.8	94.6
80°	62.8	62.8	62.8	63.2	63.5	64.7	65.8	66.6	67.3	68.8	70.3
82.5°	40.1	40.5	40.8	42.0	43.1	43.9	44.6	45.8	46.9	46.9	46.9
85°	25.0	24.2	23.4	24.2	25.0	25.7	26.5	26.9	27.2	28.0	28.7
87.5°	12.1	12.1	12.1	12.1	12.1	12.5	12.9	12.9	12.9	12.9	12.9
90°	17.3	17.0	16.8	16.5	16.3	15.9	15.4	14.8	14.3	13.8	12.2
92.5°	19.6	19.5	19.3	19.2	19.1	18.6	17.7	16.8	15.9	15.0	13.8
95°	21.9	21.9	21.9	21.9	21.9	21.4	20.5	19.6	18.8	17.9	16.4
97.5°	23.6	23.5	23.4	23.2	23.1	22.5	21.5	20.5	19.5	18.4	25.0
100°	24.2	24.1	23.9	23.8	23.7	23.1	22.1	21.1	20.0	19.0	39.0
102.5°	24.8	24.5	24.3	24.0	23.7	25.7	30.0	34.2	38.4	42.6	64.9
105°	25.3	25.1	24.8	24.6	24.3	35.5	58.2	80.8	103.5	126.1	137.7
107.5°	59.9	76.7	93.4	110.2	127.0	145.2	164.9	184.6	204.3	224.1	222.1
110°	158.4	176.7	195.0	213.3	231.6	242.9	247.1	251.3	255.5	259.8	258.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	300.1	300.3	300.6	300.9	301.1	300.7	299.5	298.4	297.2	296.1	294.6
115°	338.7	338.2	337.7	337.1	336.6	335.7	334.5	333.2	331.9	330.6	329.5
117.5°	369.8	369.7	369.5	369.4	369.3	368.7	367.7	366.6	365.6	364.6	364.0
120°	402.0	402.0	402.0	402.0	402.0	401.5	400.5	399.5	398.5	397.4	397.0
122.5°	433.7	433.6	433.5	433.3	433.2	432.8	432.2	431.5	430.9	430.3	429.7
125°	463.1	462.8	462.6	462.3	462.1	461.8	461.6	461.3	461.0	460.8	460.3
127.5°	491.9	492.1	492.4	492.7	492.9	492.8	492.5	492.1	491.7	491.3	490.7
130°	519.5	519.8	520.0	520.3	520.6	520.4	519.9	519.4	518.9	518.4	517.9
132.5°	544.9	545.3	545.6	546.0	546.4	546.4	545.8	545.3	544.8	544.3	543.9
135°	570.8	571.2	571.6	572.0	572.3	572.3	572.0	571.6	571.2	570.8	570.3
137.5°	595.6	595.8	596.1	596.3	596.6	596.4	595.8	595.1	594.5	593.8	593.6
140°	617.5	617.7	618.0	618.2	618.5	618.3	617.8	617.3	616.8	616.3	615.9
142.5°	637.6	638.0	638.4	638.8	639.1	639.1	638.8	638.4	638.0	637.6	637.2
145°	658.3	658.3	658.3	658.3	658.3	658.2	658.0	657.7	657.5	657.2	656.9
147.5°	673.3	674.0	674.6	675.2	675.9	676.1	675.8	675.6	675.3	675.1	674.8
150°	690.6	691.0	691.4	691.8	692.1	692.2	691.9	691.7	691.4	691.2	690.9
152.5°	704.4	705.1	705.7	706.3	707.0	707.1	706.5	706.0	705.5	705.0	704.9
155°	717.1	717.9	718.6	719.4	720.2	720.2	719.6	719.0	718.3	717.7	717.5
157.5°	728.0	729.1	730.1	731.1	732.1	732.3	731.5	730.7	730.0	729.2	729.3
160°	738.4	739.3	740.2	741.1	742.0	742.1	741.3	740.5	739.8	739.0	739.1
162.5°	748.2	749.0	749.7	750.5	751.3	751.2	750.3	749.4	748.5	747.6	747.8
165°	755.7	756.6	757.5	758.4	759.3	759.2	758.2	757.2	756.1	755.1	755.2
167.5°	761.4	762.5	763.5	764.5	765.5	765.5	764.5	763.5	762.5	761.4	761.4
170°	766.6	767.7	768.7	769.7	770.7	770.7	769.7	768.7	767.7	766.6	766.6
172.5°	769.5	770.7	771.8	773.0	774.1	774.2	773.2	772.1	771.1	770.1	770.0
175°	772.4	773.4	774.4	775.5	776.5	776.6	775.7	774.8	773.9	773.0	772.8
177.5°	773.0	774.2	775.5	776.8	778.1	778.2	777.2	776.2	775.1	774.1	774.0
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0
2.5°	1743.5	1739.0	1722.3	1705.7	1686.8	1667.9	1653.9	1639.9	1619.1	1598.3	1581.3
5°	1889.5	1868.3	1833.1	1798.0	1750.3	1702.7	1670.5	1638.4	1595.3	1552.1	1517.7
7.5°	2005.2	1968.9	1919.7	1870.6	1808.2	1745.8	1686.8	1627.8	1562.0	1496.2	1442.5
10°	2079.0	2054.4	1997.7	1940.9	1857.3	1773.8	1691.3	1608.9	1524.1	1439.4	1368.3
12.5°	2086.2	2088.4	2036.2	1984.0	1889.5	1794.9	1694.7	1594.5	1487.8	1381.2	1298.4
15°	2023.0	2061.9	2033.2	2004.5	1909.2	1813.9	1690.6	1567.3	1444.3	1321.4	1225.7
17.5°	1905.8	1989.3	1993.5	1997.7	1902.3	1807.0	1670.5	1534.0	1394.8	1255.6	1155.0
20°	1745.8	1869.1	1911.4	1953.8	1876.3	1798.7	1652.0	1505.2	1349.4	1193.6	1088.1
22.5°	1582.4	1732.2	1809.7	1887.2	1829.7	1772.2	1616.1	1459.9	1295.3	1130.8	1023.8
25°	1396.3	1559.7	1678.8	1798.0	1762.8	1727.6	1573.7	1419.8	1244.7	1069.6	960.3
27.5°	1234.1	1400.1	1543.8	1687.5	1680.0	1672.4	1519.6	1366.8	1187.5	1008.3	902.8
30°	1089.6	1244.3	1405.0	1565.8	1584.3	1602.8	1455.3	1307.8	1128.2	948.5	846.8
32.5°	961.8	1096.8	1269.2	1441.7	1478.0	1514.3	1381.2	1248.1	1070.3	892.6	794.6
35°	857.0	979.5	1152.0	1324.5	1369.8	1415.2	1299.5	1183.8	1010.6	837.3	743.9
37.5°	764.3	866.8	1035.1	1203.4	1259.0	1314.6	1211.0	1107.4	945.1	782.9	697.0
40°	687.6	770.0	924.7	1079.4	1143.7	1208.0	1122.5	1037.0	883.1	729.2	650.1
42.5°	623.3	696.6	837.0	977.3	1038.9	1100.6	1028.3	956.1	819.2	682.3	610.0
45°	568.4	627.1	754.5	882.0	940.6	999.2	937.2	875.2	754.5	633.9	566.5
47.5°	517.0	567.3	676.2	785.1	837.3	889.5	841.1	792.7	690.6	588.5	527.6
50°	470.9	511.3	606.6	701.9	747.3	792.7	750.0	707.2	623.3	539.3	486.4
52.5°	430.8	463.7	543.5	623.3	662.2	701.2	664.5	627.8	561.2	494.7	448.5
55°	391.1	419.0	488.3	557.5	583.9	610.4	582.1	553.7	500.0	446.3	407.3
57.5°	354.0	379.0	435.7	492.4	512.8	533.3	507.5	481.8	441.4	400.9	368.4
60°	317.7	338.1	385.4	432.7	445.1	457.6	436.8	416.0	387.7	359.3	330.2
62.5°	284.0	302.6	337.7	372.9	381.2	389.5	373.7	357.8	336.2	314.7	292.0
65°	249.2	263.2	292.0	320.7	326.0	331.3	317.3	303.3	287.1	270.8	254.2
67.5°	217.1	226.9	250.4	273.8	274.2	274.6	263.2	251.9	242.8	233.7	220.5
70°	185.7	195.2	210.7	226.2	226.5	226.9	217.8	208.8	202.0	195.2	185.3
72.5°	153.5	160.4	172.1	183.8	183.0	182.3	176.6	170.9	165.7	160.4	153.2
75°	124.4	130.1	138.0	146.0	143.7	141.4	138.4	135.4	130.9	126.3	121.8
77.5°	98.0	101.4	105.9	110.4	108.9	107.4	104.8	102.1	98.7	95.3	93.4
80°	71.9	73.4	76.4	79.4	78.7	77.9	74.9	71.9	71.1	70.3	67.7
82.5°	48.8	50.7	51.4	52.2	51.8	51.4	49.2	46.9	46.1	45.4	45.0
85°	29.1	29.5	29.9	30.3	29.1	28.0	27.2	26.5	26.5	26.5	26.1
87.5°	13.2	13.6	13.6	13.6	13.2	12.9	12.1	11.3	11.7	12.1	12.1
90°	10.5	8.8	7.2	5.7	4.4	3.1	1.9	0.6	1.9	3.1	4.4
92.5°	12.7	11.5	10.4	10.2	10.9	11.7	12.5	13.2	12.5	11.7	10.9
95°	15.0	13.6	12.2	14.1	19.4	24.6	29.9	35.1	29.9	24.6	19.4
97.5°	31.5	38.0	44.5	49.6	53.2	56.8	60.4	63.9	60.4	56.8	53.2
100°	58.9	78.9	98.9	107.6	105.0	102.5	99.9	97.3	99.9	102.5	105.0
102.5°	87.2	109.4	131.7	142.0	140.3	138.7	137.0	135.4	137.0	138.7	140.3
105°	149.2	160.7	172.2	177.3	175.9	174.5	173.1	171.6	173.1	174.5	175.9
107.5°	220.2	218.3	216.4	214.8	213.7	212.5	211.4	210.2	211.4	212.5	213.7
110°	257.0	255.5	254.1	252.9	251.9	250.9	249.8	248.8	249.8	250.9	251.9



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	293.2	291.8	290.4	289.3	288.4	287.5	286.6	285.7	286.6	287.5	288.4
115°	328.3	327.2	326.0	325.0	324.3	323.5	322.7	322.0	322.7	323.5	324.3
117.5°	363.3	362.7	362.0	361.3	360.4	359.5	358.6	357.7	358.6	359.5	360.4
120°	396.7	396.3	395.9	395.1	394.0	392.8	391.7	390.5	391.7	392.8	394.0
122.5°	429.2	428.7	428.2	427.5	426.6	425.7	424.8	423.9	424.8	425.7	426.6
125°	459.8	459.3	458.7	458.0	456.9	455.9	454.9	453.9	454.9	455.9	456.9
127.5°	490.0	489.4	488.8	487.9	486.9	485.9	484.8	483.8	484.8	485.9	486.9
130°	517.4	516.8	516.3	515.6	514.5	513.5	512.5	511.5	512.5	513.5	514.5
132.5°	543.5	543.2	542.8	542.1	541.0	540.0	539.0	538.0	539.0	540.0	541.0
135°	569.8	569.3	568.8	568.1	567.3	566.6	565.8	565.0	565.8	566.6	567.3
137.5°	593.3	593.1	592.8	592.2	591.2	590.1	589.1	588.1	589.1	590.1	591.2
140°	615.5	615.1	614.8	614.2	613.4	612.7	611.9	611.1	611.9	612.7	613.4
142.5°	636.8	636.5	636.1	635.5	634.7	634.0	633.2	632.4	633.2	634.0	634.7
145°	656.7	656.4	656.2	655.6	654.7	653.8	652.9	652.0	652.9	653.8	654.7
147.5°	674.5	674.3	674.0	673.6	672.9	672.3	671.7	671.0	671.7	672.3	672.9
150°	690.7	690.4	690.2	689.8	689.5	689.1	688.7	688.3	688.7	689.1	689.5
152.5°	704.7	704.6	704.5	704.4	704.2	704.1	704.0	703.9	704.0	704.1	704.2
155°	717.4	717.3	717.2	717.2	717.5	717.7	718.0	718.3	718.0	717.7	717.5
157.5°	729.4	729.6	729.7	729.8	729.8	729.8	729.8	729.8	729.8	729.8	729.8
160°	739.2	739.4	739.5	739.6	739.8	739.9	740.0	740.1	740.0	739.9	739.8
162.5°	747.9	748.0	748.1	748.4	748.8	749.2	749.5	749.9	749.5	749.2	748.8
165°	755.4	755.5	755.6	755.9	756.3	756.6	757.0	757.4	757.0	756.6	756.3
167.5°	761.4	761.4	761.4	761.7	762.2	762.7	763.2	763.8	763.2	762.7	762.2
170°	766.6	766.6	766.6	766.9	767.4	767.9	768.4	768.9	768.4	767.9	767.4
172.5°	769.8	769.7	769.6	769.8	770.5	771.1	771.8	772.4	771.8	771.1	770.5
175°	772.7	772.6	772.5	772.7	773.4	774.0	774.6	775.3	774.6	774.0	773.4
177.5°	773.9	773.7	773.6	773.9	774.5	775.1	775.8	776.4	775.8	775.1	774.5
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0	1630.0
2.5°	1564.2	1549.5	1534.7	1523.4	1512.0	1492.8	1473.5	1468.9	1464.4	1458.0	1451.5
5°	1483.3	1447.0	1410.7	1378.2	1345.6	1320.3	1295.0	1278.3	1261.7	1249.6	1237.5
7.5°	1388.8	1334.3	1279.8	1241.3	1202.7	1166.0	1129.3	1117.6	1105.9	1090.0	1074.1
10°	1297.2	1237.1	1177.0	1126.7	1076.4	1040.4	1004.5	990.1	975.8	955.7	935.7
12.5°	1215.5	1149.7	1083.9	1033.2	982.6	947.8	913.0	892.2	871.4	860.0	848.7
15°	1130.1	1059.7	989.4	942.5	895.6	864.2	832.8	814.6	796.5	785.5	774.6
17.5°	1054.4	984.8	915.2	870.2	825.2	796.5	767.7	751.9	736.0	727.7	719.3
20°	982.6	914.5	846.4	802.5	758.7	735.2	711.8	701.6	691.4	684.5	677.7
22.5°	916.8	849.8	782.9	745.4	708.0	689.1	670.2	663.0	655.8	650.1	644.5
25°	851.0	791.2	731.4	699.7	667.9	652.4	636.9	629.7	622.5	616.8	611.2
27.5°	797.2	740.1	683.0	655.8	628.6	616.5	604.4	598.7	593.0	587.7	582.4
30°	745.1	694.0	642.9	619.5	596.0	585.1	574.1	568.4	562.8	557.8	552.9
32.5°	696.6	652.8	608.9	587.3	565.8	556.7	547.6	540.8	534.0	530.2	526.5
35°	650.5	611.2	571.8	554.1	536.3	527.2	518.1	512.5	506.8	503.8	500.7
37.5°	611.2	576.0	540.8	523.8	506.8	498.1	489.4	484.5	479.6	478.4	477.3
40°	571.1	540.8	510.6	493.9	477.3	469.7	462.2	459.1	456.1	455.4	454.6
42.5°	537.8	508.3	478.8	463.7	448.5	442.1	435.7	434.2	432.7	433.8	434.9
45°	499.2	474.6	450.1	436.1	422.1	416.8	411.5	410.3	409.2	411.5	413.8
47.5°	466.7	444.0	421.3	408.1	394.8	391.1	387.3	386.9	386.5	389.5	392.6
50°	433.4	411.5	389.5	379.0	368.4	365.0	361.6	362.7	363.8	368.7	373.7
52.5°	402.4	382.0	361.6	351.7	341.9	339.6	337.4	340.0	342.6	347.9	353.2
55°	368.4	349.8	331.3	323.7	316.2	313.9	311.6	316.9	322.2	327.1	332.1
57.5°	335.8	319.6	303.3	296.5	289.7	289.3	288.9	293.9	298.8	304.1	309.4
60°	301.0	287.4	273.8	268.5	263.2	264.0	264.7	270.4	276.1	280.2	284.4
62.5°	269.3	257.9	246.6	241.7	236.8	238.6	240.5	246.2	251.9	256.8	261.7
65°	237.5	228.1	218.6	215.2	211.8	214.4	217.1	222.0	226.9	230.3	233.7
67.5°	207.3	199.3	191.4	188.7	186.1	188.7	191.4	196.3	201.2	204.6	208.0
70°	175.5	169.1	162.6	160.7	158.8	161.9	164.9	169.1	173.2	176.6	180.0
72.5°	146.0	141.1	136.2	135.8	135.4	138.0	140.7	144.9	149.0	151.3	153.5
75°	117.2	114.6	111.9	111.6	111.2	113.8	116.5	118.8	121.0	122.9	124.8
77.5°	91.5	89.3	87.0	87.4	87.7	89.6	91.5	93.8	96.1	97.2	98.3
80°	65.1	64.3	63.5	64.3	65.1	66.6	68.1	69.6	71.1	71.9	72.6
82.5°	44.6	43.9	43.1	44.2	45.4	46.5	47.7	48.8	49.9	50.3	50.7
85°	25.7	26.9	28.0	28.0	28.0	28.4	28.7	29.1	29.5	29.1	28.7
87.5°	12.1	12.5	12.9	12.9	12.9	13.2	13.6	13.6	13.6	13.2	12.9
90°	5.7	7.2	8.8	10.5	12.2	13.8	14.3	14.8	15.4	15.9	16.3
92.5°	10.2	10.4	11.5	12.7	13.8	15.0	15.9	16.8	17.7	18.6	19.1
95°	14.1	12.2	13.6	15.0	16.4	17.9	18.8	19.6	20.5	21.4	21.9
97.5°	49.6	44.5	38.0	31.5	25.0	18.4	19.5	20.5	21.5	22.5	23.1
100°	107.6	98.9	78.9	58.9	39.0	19.0	20.0	21.1	22.1	23.1	23.7
102.5°	142.0	131.7	109.4	87.2	64.9	42.6	38.4	34.2	30.0	25.7	23.7
105°	177.3	172.2	160.7	149.2	137.7	126.1	103.5	80.8	58.2	35.5	24.3
107.5°	214.8	216.4	218.3	220.2	222.1	224.1	204.3	184.6	164.9	145.2	127.0
110°	252.9	254.1	255.5	257.0	258.4	259.8	255.5	251.3	247.1	242.9	231.6



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	289.3	290.4	291.8	293.2	294.6	296.1	297.2	298.4	299.5	300.7	301.1
115°	325.0	326.0	327.2	328.3	329.5	330.6	331.9	333.2	334.5	335.7	336.6
117.5°	361.3	362.0	362.7	363.3	364.0	364.6	365.6	366.6	367.7	368.7	369.3
120°	395.1	395.9	396.3	396.7	397.0	397.4	398.5	399.5	400.5	401.5	402.0
122.5°	427.5	428.2	428.7	429.2	429.7	430.3	430.9	431.5	432.2	432.8	433.2
125°	458.0	458.7	459.3	459.8	460.3	460.8	461.0	461.3	461.6	461.8	462.1
127.5°	487.9	488.8	489.4	490.0	490.7	491.3	491.7	492.1	492.5	492.8	492.9
130°	515.6	516.3	516.8	517.4	517.9	518.4	518.9	519.4	519.9	520.4	520.6
132.5°	542.1	542.8	543.2	543.5	543.9	544.3	544.8	545.3	545.8	546.4	546.4
135°	568.1	568.8	569.3	569.8	570.3	570.8	571.2	571.6	572.0	572.3	572.3
137.5°	592.2	592.8	593.1	593.3	593.6	593.8	594.5	595.1	595.8	596.4	596.6
140°	614.2	614.8	615.1	615.5	615.9	616.3	616.8	617.3	617.8	618.3	618.5
142.5°	635.5	636.1	636.5	636.8	637.2	637.6	638.0	638.4	638.8	639.1	639.1
145°	655.6	656.2	656.4	656.7	656.9	657.2	657.5	657.7	658.0	658.2	658.3
147.5°	673.6	674.0	674.3	674.5	674.8	675.1	675.3	675.6	675.8	676.1	675.9
150°	689.8	690.2	690.4	690.7	690.9	691.2	691.4	691.7	691.9	692.2	692.1
152.5°	704.4	704.5	704.6	704.7	704.9	705.0	705.5	706.0	706.5	707.1	707.0
155°	717.2	717.2	717.3	717.4	717.5	717.7	718.3	719.0	719.6	720.2	720.2
157.5°	729.8	729.7	729.6	729.4	729.3	729.2	730.0	730.7	731.5	732.3	732.1
160°	739.6	739.5	739.4	739.2	739.1	739.0	739.8	740.5	741.3	742.1	742.0
162.5°	748.4	748.1	748.0	747.9	747.8	747.6	748.5	749.4	750.3	751.2	751.3
165°	755.9	755.6	755.5	755.4	755.2	755.1	756.1	757.2	758.2	759.2	759.3
167.5°	761.7	761.4	761.4	761.4	761.4	761.4	762.5	763.5	764.5	765.5	765.5
170°	766.9	766.6	766.6	766.6	766.6	766.6	767.7	768.7	769.7	770.7	770.7
172.5°	769.8	769.6	769.7	769.8	770.0	770.1	771.1	772.1	773.2	774.2	774.1
175°	772.7	772.5	772.6	772.7	772.8	773.0	773.9	774.8	775.7	776.6	776.5
177.5°	773.9	773.6	773.7	773.9	774.0	774.1	775.1	776.2	777.2	778.2	778.1
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1630.0	1630.0	1630.0	1630.0
2.5°	1448.9	1446.2	1435.6	1425.1
5°	1228.4	1219.3	1216.3	1213.3
7.5°	1073.3	1072.6	1056.7	1040.8
10°	936.8	937.9	923.6	909.2
12.5°	839.2	829.8	828.6	827.5
15°	765.9	757.2	755.6	754.1
17.5°	714.0	708.7	707.2	705.7
20°	674.7	671.7	669.0	666.4
22.5°	640.7	636.9	634.6	632.4
25°	607.8	604.4	603.6	602.9
27.5°	578.3	574.1	574.1	574.1
30°	550.3	547.6	546.5	545.4
32.5°	524.2	521.9	521.9	521.9
35°	499.6	498.5	497.0	495.4
37.5°	477.3	477.3	476.5	475.8
40°	455.7	456.9	456.9	456.9
42.5°	436.1	437.2	437.2	437.2
45°	415.6	417.5	418.3	419.0
47.5°	395.6	398.6	399.4	400.1
50°	375.9	378.2	378.6	379.0
52.5°	355.9	358.5	360.4	362.3
55°	334.7	337.4	338.5	339.6
57.5°	312.0	314.7	315.0	315.4
60°	287.1	289.7	290.5	291.2
62.5°	263.2	264.7	265.5	266.3
65°	236.0	238.3	239.8	241.3
67.5°	209.9	211.8	211.8	211.8
70°	180.8	181.5	182.7	183.8
72.5°	153.9	154.3	154.3	154.3
75°	125.6	126.3	126.7	127.1
77.5°	98.7	99.1	99.1	99.1
80°	72.2	71.9	71.9	71.9
82.5°	49.5	48.4	48.4	48.4
85°	28.4	28.0	28.4	28.7
87.5°	12.9	12.9	12.9	12.9
90°	16.5	16.8	17.0	17.3
92.5°	19.2	19.3	19.5	19.6
95°	21.9	21.9	21.9	21.9
97.5°	23.2	23.4	23.5	23.6
100°	23.8	23.9	24.1	24.2
102.5°	24.0	24.3	24.5	24.8
105°	24.6	24.8	25.1	25.3
107.5°	110.2	93.4	76.7	59.9
110°	213.3	195.0	176.7	158.4



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	300.9	300.6	300.3	300.1
115°	337.1	337.7	338.2	338.7
117.5°	369.4	369.5	369.7	369.8
120°	402.0	402.0	402.0	402.0
122.5°	433.3	433.5	433.6	433.7
125°	462.3	462.6	462.8	463.1
127.5°	492.7	492.4	492.1	491.9
130°	520.3	520.0	519.8	519.5
132.5°	546.0	545.6	545.3	544.9
135°	572.0	571.6	571.2	570.8
137.5°	596.3	596.1	595.8	595.6
140°	618.2	618.0	617.7	617.5
142.5°	638.8	638.4	638.0	637.6
145°	658.3	658.3	658.3	658.3
147.5°	675.2	674.6	674.0	673.3
150°	691.8	691.4	691.0	690.6
152.5°	706.3	705.7	705.1	704.4
155°	719.4	718.6	717.9	717.1
157.5°	731.1	730.1	729.1	728.0
160°	741.1	740.2	739.3	738.4
162.5°	750.5	749.7	749.0	748.2
165°	758.4	757.5	756.6	755.7
167.5°	764.5	763.5	762.5	761.4
170°	769.7	768.7	767.7	766.6
172.5°	773.0	771.8	770.7	769.5
175°	775.5	774.4	773.4	772.4
177.5°	776.8	775.5	774.2	773.0
180°	775.3	775.3	775.3	775.3



TEST NUMBER: P831537

CATALOG NUMBER: S123DIP-S560D585U840-4F0-1E-UDD-G

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	13.76	14.61	14.70	15.56	16.80	16.00	16.84	16.94	17.80	19.03
	3H	15.41	16.17	16.36	17.13	18.39	17.42	18.18	18.37	19.14	20.40
	4H	15.98	16.70	16.95	17.67	18.94	17.87	18.59	18.84	19.55	20.82
	6H	16.35	17.01	17.33	17.99	19.27	18.15	18.81	19.12	19.78	21.06
	8H	16.45	17.08	17.44	18.07	19.35	18.21	18.84	19.19	19.82	21.10
	12H	16.50	17.09	17.49	18.08	19.38	18.23	18.82	19.22	19.81	21.11
4H	2H	14.33	15.05	15.31	16.02	17.29	16.16	16.88	17.13	17.84	19.11
	3H	16.16	16.76	17.14	17.76	19.04	17.78	18.37	18.76	19.37	20.65
	4H	16.86	17.40	17.85	18.39	19.70	18.36	18.90	19.35	19.89	21.20
	6H	17.33	17.80	18.34	18.82	20.12	18.76	19.23	19.77	20.25	21.55
	8H	17.47	17.91	18.48	18.92	20.23	18.88	19.31	19.88	20.32	21.64
	12H	17.54	17.93	18.56	18.95	20.28	18.92	19.31	19.94	20.34	21.66
8H	4H	17.12	17.56	18.13	18.57	19.89	18.46	18.90	19.47	19.91	21.23
	6H	17.71	18.07	18.74	19.12	20.44	18.97	19.33	20.00	20.38	21.69
	8H	17.92	18.24	18.96	19.27	20.61	19.15	19.46	20.18	20.50	21.83
	12H	18.04	18.32	19.08	19.35	20.73	19.25	19.53	20.29	20.56	21.94
12H	4H	17.13	17.52	18.15	18.54	19.87	18.44	18.83	19.46	19.86	21.18
	6H	17.76	18.08	18.80	19.12	20.45	18.98	19.30	20.02	20.33	21.67
	8H	18.00	18.28	19.04	19.31	20.69	19.18	19.46	20.22	20.49	21.87