

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: CORELITE

Report Number: P855458

Luminaire Tested: SQ2-FA-050U-125D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855458
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-050U-125D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

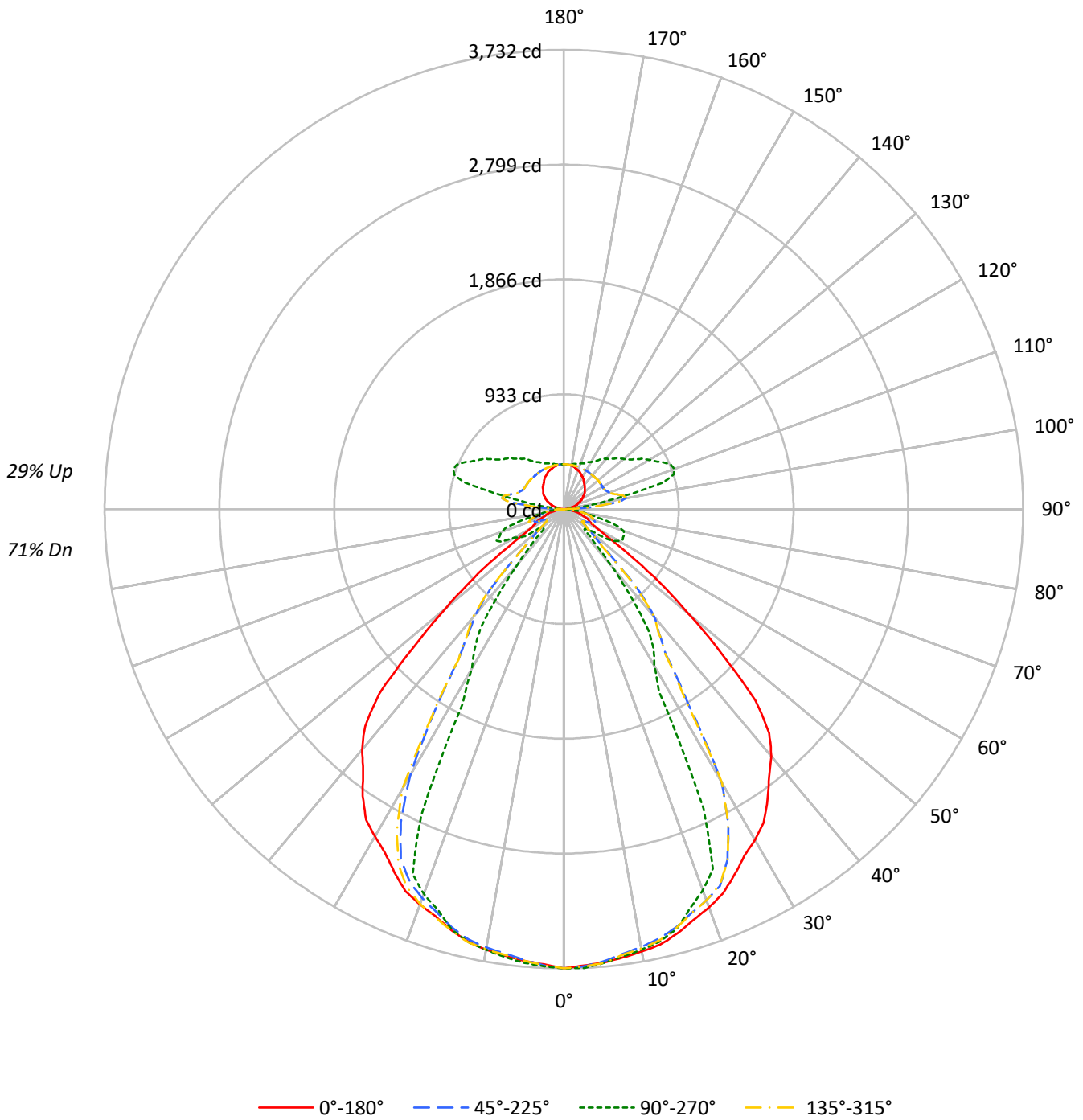
Lumens per Lamp: N/A
Luminaire Lumens: 7723.3 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 64
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

TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

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	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	71
1	104	100	96	93	98	95	92	89	85	83	81	77	75	73	69	67	66	62
2	96	89	84	79	91	85	80	76	77	73	70	70	67	64	63	61	59	55
3	89	81	74	69	84	77	71	66	70	65	61	63	60	57	57	55	52	49
4	83	73	66	60	78	70	63	58	64	59	55	58	54	51	53	50	47	44
5	77	66	59	54	73	64	57	52	58	53	49	54	49	46	49	46	43	40
6	72	61	53	48	68	58	52	47	54	48	44	50	45	42	45	42	39	37
7	67	56	49	43	64	54	47	42	50	44	40	46	41	38	42	39	36	34
8	63	52	44	40	60	50	43	39	46	41	37	43	38	35	40	36	33	31
9	59	48	41	36	57	46	40	35	43	38	34	40	35	32	37	33	30	29
10	56	45	38	33	53	43	37	33	40	35	31	37	33	30	35	31	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	60258	60258	60258	60258
5°	59940	60031	59712	59986
10°	59848	59617	59617	59617
15°	59654	59042	59183	59042
20°	59190	56677	58756	57209
25°	58413	47835	58013	48838
30°	57877	27443	57247	27811
35°	56861	23578	56139	23245
40°	55287	12397	53744	12279
45°	50257	5332	48458	5332
50°	33156	6435	31461	6011
55°	18539	11885	17588	10773
60°	9998	16724	9813	14996
65°	8814	20321	9249	23117
70°	8238	24316	7841	25643
75°	7729	20892	7904	21597
80°	6546	14923	6546	15704
85°	5743	8336	5224	9911

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 50257 cd/sqm



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.2	4.5
10°-20°	996.4	12.9
20°-30°	1358.5	17.6
30°-40°	1141.6	14.8
40°-50°	648.4	8.4
50°-60°	344.0	4.5
60°-70°	316.8	4.1
70°-80°	232.6	3.0
80°-90°	61.2	0.8
90°-100°	145.8	1.9
100°-110°	462.3	6.0
110°-120°	453.3	5.9
120°-130°	368.9	4.8
130°-140°	300.8	3.9
140°-150°	234.5	3.0
150°-160°	169.0	2.2
160°-170°	103.2	1.3
170°-180°	34.8	0.5
0°-30°	2706.1	35.0
0°-40°	3847.8	49.8
0°-60°	4840.2	62.7
0°-90°	5450.8	70.6
90°-120°	1061.4	13.7
90°-150°	1965.5	25.4
90°-180°	2272.0	29.4
0°-180°	7723.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3732	3732	3732	3732	3732	
5°	3698	3704	3684	3701	3698	351
15°	3569	3532	3541	3532	3569	1006
25°	3279	2685	3256	2741	3279	1512
35°	2885	1196	2848	1179	2885	1801
45°	2201	234	2122	234	2201	1609
55°	659	422	625	383	659	634
65°	231	532	242	605	231	232
75°	124	335	127	346	124	128
85°	31	45	28	54	31	34
90°	0	4	0	4	0	2
95°	20	63	20	63	20	23
105°	80	832	80	832	80	85
115°	144	900	144	900	144	142
125°	199	707	199	707	199	177
135°	240	581	240	581	240	186
145°	281	484	281	484	281	176
155°	320	413	320	413	320	148
165°	349	380	349	380	349	98
175°	365	366	365	366	365	35
180°	366	366	366	366	366	



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1
2.5°	3711.8	3766.8	3718.6	3712.3	3732.1	3727.7	3720.8	3746.8	3702.7	3746.8	3711.8
5°	3698.3	3761.6	3689.8	3670.9	3703.9	3681.9	3701.1	3739.2	3684.2	3733.7	3678.6
7.5°	3675.2	3731.3	3645.4	3633.1	3665.7	3646.3	3654.3	3707.4	3661.1	3693.6	3643.6
10°	3650.4	3699.9	3613.8	3606.1	3636.3	3617.1	3625.1	3680.3	3636.3	3666.6	3616.6
12.5°	3623.3	3661.9	3575.6	3572.2	3598.1	3585.4	3589.1	3635.6	3600.3	3630.6	3582.9
15°	3568.8	3604.6	3518.1	3504.7	3532.2	3521.1	3526.6	3568.2	3540.6	3560.0	3518.1
17.5°	3501.2	3529.9	3443.9	3403.3	3404.4	3418.2	3443.9	3493.9	3469.2	3494.5	3435.4
20°	3444.9	3478.0	3383.0	3304.1	3298.6	3312.3	3383.0	3433.4	3419.6	3447.1	3363.3
22.5°	3379.7	3401.7	3315.4	3182.2	3163.5	3177.2	3306.5	3366.0	3361.1	3379.8	3275.5
25°	3278.9	3300.9	3143.8	2952.0	2685.1	2935.4	3149.4	3256.4	3256.4	3272.9	3135.4
27.5°	3176.4	3177.0	2892.8	1895.9	1672.4	1827.6	2888.8	3120.7	3147.2	3138.9	2868.5
30°	3104.4	3085.2	2564.0	1532.5	1472.0	1510.5	2566.8	3026.5	3070.6	3040.3	2499.3
32.5°	3021.1	2966.6	1893.1	1409.0	1359.4	1393.6	1830.6	2914.8	2991.8	2926.3	1965.7
35°	2884.8	2741.7	1443.8	1245.7	1196.2	1240.2	1432.6	2694.2	2848.2	2672.1	1491.7
37.5°	2738.0	2179.3	1271.0	992.2	885.5	970.8	1264.8	2156.0	2678.3	2105.9	1269.9
40°	2623.1	1712.2	1142.7	725.8	588.2	684.6	1134.3	1633.5	2549.9	1757.4	1114.6
42.5°	2470.1	1504.1	917.5	461.0	360.8	421.9	879.8	1469.3	2392.3	1522.7	887.1
45°	2201.0	1292.8	543.2	252.9	233.5	244.6	501.0	1269.0	2122.2	1241.5	554.5
47.5°	1743.3	985.9	349.0	214.9	235.9	214.9	338.3	954.7	1646.5	952.9	348.5
50°	1320.0	769.6	270.1	217.6	256.2	217.6	261.7	743.3	1252.5	812.2	267.3
52.5°	977.8	643.1	220.6	238.6	307.9	243.0	214.4	626.1	928.2	655.2	208.8
55°	658.6	504.5	177.3	314.9	422.2	323.0	177.3	489.9	624.8	484.5	171.7
57.5°	417.7	375.3	179.6	404.7	481.9	412.6	182.4	361.7	400.8	363.4	157.6
60°	309.6	295.8	199.9	429.8	517.9	435.3	202.7	284.7	303.9	281.9	168.9
62.5°	255.6	233.0	240.3	465.5	538.2	453.3	245.4	222.2	265.7	212.8	186.9
65°	230.7	151.0	284.2	471.4	531.9	471.4	287.0	143.0	242.1	153.9	253.4
67.5°	208.3	112.0	274.7	468.1	535.3	469.3	267.9	106.9	199.9	104.1	259.0
70°	174.5	100.2	259.0	476.5	515.1	460.0	259.0	97.3	166.1	94.5	303.9
72.5°	145.2	95.1	240.9	440.1	456.5	423.5	243.2	94.6	145.8	85.2	286.0
75°	123.9	93.6	230.7	351.5	334.9	334.9	225.2	90.9	126.7	85.4	222.4
77.5°	92.9	83.0	191.4	229.4	216.8	216.8	188.0	80.1	88.3	75.2	180.6
80°	70.4	75.9	157.6	168.6	160.5	160.5	152.0	73.1	70.4	70.4	149.2
82.5°	54.7	64.6	121.6	123.6	117.6	115.5	118.2	64.0	54.7	59.0	115.4
85°	31.0	44.8	64.7	53.3	45.0	42.3	61.9	42.0	28.2	42.0	61.9
87.5°	11.3	20.3	9.7	9.7	9.7	9.7	9.7	20.3	11.3	18.1	12.0
90°	0.0	1.2	3.5	3.5	3.5	3.5	3.5	1.2	0.0	1.2	3.5
92.5°	6.4	25.5	81.7	27.2	19.1	27.2	81.7	25.5	6.4	25.5	81.7
95°	19.6	59.0	264.7	98.1	63.3	98.1	264.7	59.0	19.6	59.0	264.7
97.5°	36.4	76.5	448.3	280.2	171.9	280.2	448.3	76.5	36.4	76.5	448.3
100°	48.4	86.6	510.9	465.8	302.7	465.8	510.9	86.6	48.4	86.6	510.9
102.5°	61.2	97.7	499.8	684.1	523.6	684.1	499.8	97.7	61.2	97.7	499.8
105°	80.5	113.2	455.7	868.0	832.0	868.0	455.7	113.2	80.5	113.2	455.7
107.5°	99.9	130.1	413.6	887.2	935.8	887.2	413.6	130.1	99.9	130.1	413.6
110°	112.8	142.1	392.4	865.1	955.2	865.1	392.4	142.1	112.8	142.1	392.4



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	125.6	153.1	380.4	827.0	941.3	827.0	380.4	153.1	125.6	153.1	380.4
115°	143.8	170.8	368.3	764.9	899.9	764.9	368.3	170.8	143.8	170.8	368.3
117.5°	161.5	187.2	363.4	705.1	841.2	705.1	363.4	187.2	161.5	187.2	363.4
120°	172.6	197.4	362.4	668.1	799.8	668.1	362.4	197.4	172.6	197.4	362.4
122.5°	183.7	207.6	362.4	638.4	761.1	638.4	362.4	207.6	183.7	207.6	362.4
125°	199.1	222.7	362.4	599.7	706.6	599.7	362.4	222.7	199.1	222.7	362.4
127.5°	212.7	235.4	362.4	569.6	660.8	569.6	362.4	235.4	212.7	235.4	362.4
130°	221.0	244.6	362.4	551.9	634.1	551.9	362.4	244.6	221.0	244.6	362.4
132.5°	229.2	252.9	361.6	537.9	612.0	537.9	361.6	252.9	229.2	252.9	361.6
135°	240.5	264.1	360.2	515.9	581.2	515.9	360.2	264.1	240.5	264.1	360.2
137.5°	251.6	276.3	360.0	494.7	553.1	494.7	360.0	276.3	251.6	276.3	360.0
140°	259.0	283.7	359.1	479.9	532.8	479.9	359.1	283.7	259.0	283.7	359.1
142.5°	268.2	291.9	360.0	465.1	514.4	465.1	360.0	291.9	268.2	291.9	360.0
145°	280.7	302.2	360.2	445.1	484.5	445.1	360.2	302.2	280.7	302.2	360.2
147.5°	293.4	311.6	360.5	427.5	459.6	427.5	360.5	311.6	293.4	311.6	360.5
150°	302.7	317.2	361.4	417.2	443.1	417.2	361.4	317.2	302.7	317.2	361.4
152.5°	310.0	322.8	361.4	408.8	430.1	408.8	361.4	322.8	310.0	322.8	361.4
155°	319.9	331.2	361.4	397.4	413.1	397.4	361.4	331.2	319.9	331.2	361.4
157.5°	330.5	338.2	362.4	390.4	401.1	390.4	362.4	338.2	330.5	338.2	362.4
160°	336.0	342.7	362.4	385.7	394.7	385.7	362.4	342.7	336.0	342.7	362.4
162.5°	341.6	346.5	362.4	382.0	388.3	382.0	362.4	346.5	341.6	346.5	362.4
165°	348.7	352.1	362.4	376.4	379.8	376.4	362.4	352.1	348.7	352.1	362.4
167.5°	355.3	356.3	363.6	372.5	375.4	372.5	363.6	356.3	355.3	356.3	363.6
170°	359.1	359.1	363.6	370.6	371.6	370.6	363.6	359.1	359.1	359.1	363.6
172.5°	360.9	361.7	363.6	368.7	369.0	368.7	363.6	361.7	360.9	361.7	363.6
175°	364.8	363.7	364.8	367.1	365.9	367.1	364.8	363.7	364.8	363.7	364.8
177.5°	365.9	365.0	365.0	366.9	365.0	366.9	365.0	365.0	365.9	365.0	365.0
180°	365.9	365.9	365.9	365.9	365.9	365.9	365.9	365.9	365.9	365.9	365.9



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3732.1	3732.1	3732.1	3732.1	3732.1	3732.1
2.5°	3703.1	3718.6	3718.6	3709.5	3753.6	3711.8
5°	3665.3	3701.1	3684.5	3684.2	3739.5	3698.3
7.5°	3638.8	3672.4	3656.9	3653.8	3708.2	3675.2
10°	3611.6	3636.3	3625.3	3633.5	3683.5	3650.4
12.5°	3573.4	3602.6	3591.5	3604.2	3649.8	3623.3
15°	3507.4	3532.2	3537.7	3543.5	3596.3	3568.8
17.5°	3398.5	3410.7	3438.2	3477.1	3532.1	3501.2
20°	3313.0	3329.6	3346.1	3414.0	3478.0	3444.9
22.5°	3215.7	3210.2	3248.8	3328.4	3408.3	3379.7
25°	2953.2	2741.4	2975.3	3180.4	3287.1	3278.9
27.5°	2056.2	1784.3	2024.9	2935.5	3160.0	3176.4
30°	1618.3	1491.7	1615.5	2620.3	3065.8	3104.4
32.5°	1436.8	1349.9	1425.3	1994.4	2947.3	3021.1
35°	1239.9	1179.3	1239.9	1491.7	2714.2	2884.8
37.5°	992.3	868.6	990.2	1289.1	2194.2	2738.0
40°	739.4	582.6	717.4	1154.0	1753.5	2623.1
42.5°	492.7	375.5	466.3	908.5	1516.8	2470.1
45°	266.6	233.5	255.6	548.8	1237.8	2201.0
47.5°	209.1	221.2	209.1	346.2	946.9	1743.3
50°	200.7	239.3	200.7	267.3	783.4	1320.0
52.5°	218.7	259.5	216.5	211.1	639.2	977.8
55°	247.9	382.7	250.7	171.7	468.7	658.6
57.5°	353.0	430.6	356.8	162.7	360.9	417.7
60°	362.6	464.4	359.9	171.7	279.3	309.6
62.5°	428.9	574.8	428.3	196.5	207.7	255.6
65°	550.1	605.1	555.5	250.4	148.2	230.7
67.5°	522.1	561.3	516.6	268.5	102.1	208.3
70°	512.9	543.2	507.4	306.7	94.7	174.5
72.5°	478.5	482.4	468.6	284.2	85.2	145.2
75°	370.9	346.2	357.2	244.9	85.3	123.9
77.5°	230.5	220.6	222.4	186.9	75.3	92.9
80°	174.3	168.9	166.1	157.6	70.4	70.4
82.5°	129.4	123.9	121.1	121.6	59.0	54.7
85°	59.0	53.5	50.7	70.4	42.0	31.0
87.5°	12.0	12.0	9.8	12.0	15.8	11.3
90°	3.5	3.5	3.5	3.5	1.2	0.0
92.5°	27.2	19.1	27.2	81.7	25.5	6.4
95°	98.1	63.3	98.1	264.7	59.0	19.6
97.5°	280.2	171.9	280.2	448.3	76.5	36.4
100°	465.8	302.7	465.8	510.9	86.6	48.4
102.5°	684.1	523.6	684.1	499.8	97.7	61.2
105°	868.0	832.0	868.0	455.7	113.2	80.5
107.5°	887.2	935.8	887.2	413.6	130.1	99.9
110°	865.1	955.2	865.1	392.4	142.1	112.8



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	827.0	941.3	827.0	380.4	153.1	125.6
115°	764.9	899.9	764.9	368.3	170.8	143.8
117.5°	705.1	841.2	705.1	363.4	187.2	161.5
120°	668.1	799.8	668.1	362.4	197.4	172.6
122.5°	638.4	761.1	638.4	362.4	207.6	183.7
125°	599.7	706.6	599.7	362.4	222.7	199.1
127.5°	569.6	660.8	569.6	362.4	235.4	212.7
130°	551.9	634.1	551.9	362.4	244.6	221.0
132.5°	537.9	612.0	537.9	361.6	252.9	229.2
135°	515.9	581.2	515.9	360.2	264.1	240.5
137.5°	494.7	553.1	494.7	360.0	276.3	251.6
140°	479.9	532.8	479.9	359.1	283.7	259.0
142.5°	465.1	514.4	465.1	360.0	291.9	268.2
145°	445.1	484.5	445.1	360.2	302.2	280.7
147.5°	427.5	459.6	427.5	360.5	311.6	293.4
150°	417.2	443.1	417.2	361.4	317.2	302.7
152.5°	408.8	430.1	408.8	361.4	322.8	310.0
155°	397.4	413.1	397.4	361.4	331.2	319.9
157.5°	390.4	401.1	390.4	362.4	338.2	330.5
160°	385.7	394.7	385.7	362.4	342.7	336.0
162.5°	382.0	388.3	382.0	362.4	346.5	341.6
165°	376.4	379.8	376.4	362.4	352.1	348.7
167.5°	372.5	375.4	372.5	363.6	356.3	355.3
170°	370.6	371.6	370.6	363.6	359.1	359.1
172.5°	368.7	369.0	368.7	363.6	361.7	360.9
175°	367.1	365.9	367.1	364.8	363.7	364.8
177.5°	366.9	365.0	366.9	365.0	365.0	365.9
180°	365.9	365.9	365.9	365.9	365.9	365.9



TEST NUMBER: P855458

CATALOG NUMBER: SQ2-FA-050U-125D-840-UNV-STD-W-4

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	15.95	16.87	16.73	17.65	18.60	14.81	15.72	15.59	16.51	17.46
	3H	16.65	17.48	17.45	18.27	19.25	20.96	21.78	21.76	22.58	23.56
	4H	17.07	17.84	17.88	18.64	19.64	22.24	23.01	23.05	23.82	24.81
	6H	17.43	18.14	18.25	18.95	19.96	22.85	23.56	23.68	24.38	25.38
	8H	17.55	18.22	18.38	19.05	20.06	22.98	23.65	23.81	24.48	25.49
	12H	17.62	18.26	18.46	19.09	20.12	23.02	23.66	23.86	24.49	25.52
4H	2H	16.35	17.12	17.17	17.93	18.92	15.35	16.12	16.16	16.92	17.92
	3H	17.35	18.00	18.18	18.84	19.85	21.68	22.32	22.50	23.16	24.17
	4H	17.92	18.50	18.76	19.34	20.38	23.13	23.71	23.97	24.55	25.59
	6H	18.40	18.90	19.25	19.76	20.81	23.87	24.37	24.72	25.23	26.28
	8H	18.57	19.04	19.43	19.90	20.95	24.04	24.51	24.89	25.36	26.42
	12H	18.69	19.11	19.56	19.99	21.05	24.10	24.52	24.98	25.40	26.46
8H	4H	19.02	19.49	19.88	20.35	21.40	23.26	23.73	24.11	24.58	25.64
	6H	19.63	20.02	20.52	20.92	21.97	24.14	24.52	25.02	25.42	26.48
	8H	19.87	20.21	20.76	21.10	22.18	24.39	24.73	25.28	25.62	26.70
	12H	20.05	20.34	20.94	21.23	22.36	24.51	24.81	25.41	25.70	26.82
12H	4H	19.17	19.59	20.05	20.47	21.53	23.22	23.64	24.10	24.52	25.58
	6H	19.91	20.25	20.80	21.14	22.22	24.15	24.49	25.04	25.38	26.46
	8H	20.21	20.51	21.11	21.39	22.52	24.43	24.73	25.33	25.61	26.74