

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: P855248

Luminaire Tested: SQ2-FA-125U-125D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855248
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-125U-125D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 1250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

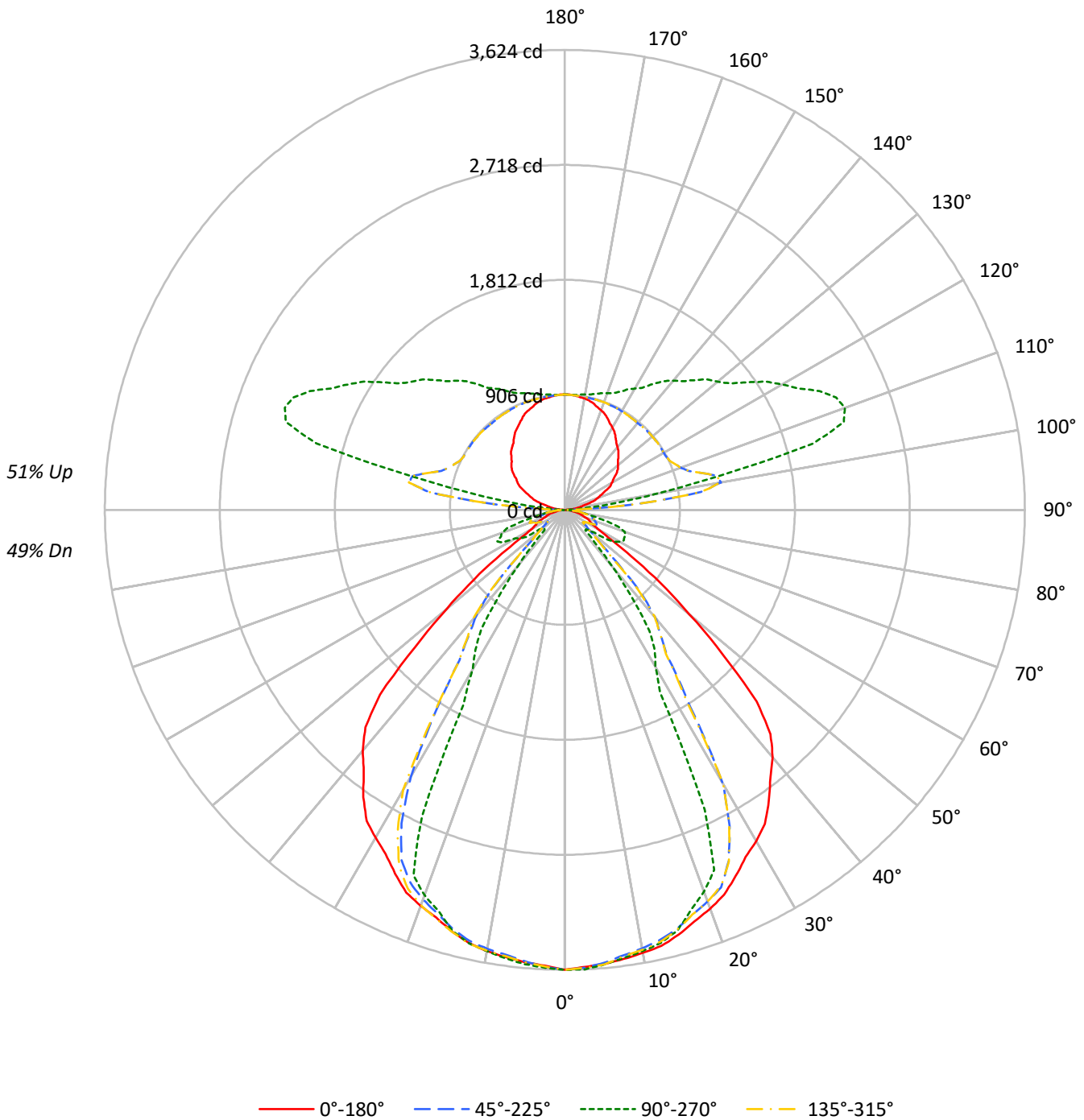
Lumens per Lamp: N/A
Luminaire Lumens: 10898.6 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 93.1
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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	98	95	91	88	91	87	84	82	74	72	70	61	60	59	50	49	48	43
2	91	84	78	74	83	78	73	69	66	63	60	55	53	51	46	44	43	38
3	84	75	69	63	77	70	64	59	60	55	52	50	47	45	42	40	38	34
4	77	68	60	55	71	63	57	52	54	49	46	46	43	40	38	36	34	31
5	72	61	54	48	66	57	51	46	49	44	41	42	38	36	35	33	31	28
6	67	56	48	43	62	52	45	41	45	40	36	39	35	32	33	30	28	25
7	62	51	43	38	57	48	41	36	42	36	33	36	32	29	31	28	26	23
8	58	47	39	34	54	44	37	33	38	33	30	33	29	27	28	26	24	21
9	54	43	36	31	50	40	34	30	36	31	27	31	27	24	27	24	22	20
10	51	40	33	29	47	37	31	27	33	28	25	29	25	23	25	22	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	58513	58513	58513	58513
5°	58204	58294	57982	58248
10°	58115	57890	57890	57890
15°	57927	57334	57469	57334
20°	57477	55036	57055	55553
25°	56721	46451	56333	47423
30°	56201	26649	55590	27005
35°	55215	22894	54515	22570
40°	53685	12039	52189	11923
45°	48802	5179	47056	5179
50°	32197	6247	30549	5835
55°	18002	11541	17078	10460
60°	9710	16239	9529	14564
65°	8562	19733	8978	22449
70°	7997	23613	7615	24902
75°	7505	20287	7673	20973
80°	6360	14486	6360	15249
85°	5576	8096	5076	9615

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 48802 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.0	3.1
10°-20°	967.5	8.9
20°-30°	1319.2	12.1
30°-40°	1108.6	10.2
40°-50°	629.7	5.8
50°-60°	334.1	3.1
60°-70°	307.6	2.8
70°-80°	225.8	2.1
80°-90°	60.0	0.6
90°-100°	347.5	3.2
100°-110°	1131.4	10.4
110°-120°	1119.1	10.3
120°-130°	914.6	8.4
130°-140°	747.5	6.9
140°-150°	582.2	5.3
150°-160°	419.7	3.9
160°-170°	256.5	2.4
170°-180°	86.5	0.8
0°-30°	2627.8	24.1
0°-40°	3736.4	34.3
0°-60°	4700.1	43.1
0°-90°	5293.5	48.6
90°-120°	2598.0	23.8
90°-150°	4842.3	44.4
90°-180°	5605.0	51.4
0°-180°	10898.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3624	3624	3624	3624	3624	
5°	3591	3597	3578	3594	3591	341
15°	3466	3430	3438	3430	3466	977
25°	3184	2607	3162	2662	3184	1468
35°	2801	1162	2766	1145	2801	1749
45°	2137	227	2061	227	2137	1563
55°	640	410	607	372	640	616
65°	224	516	235	588	224	225
75°	120	325	123	336	120	124
85°	30	44	27	52	30	33
90°	0	7	0	7	0	4
95°	47	140	47	140	47	55
105°	192	2027	192	2027	192	205
115°	355	2214	355	2214	355	352
125°	494	1751	494	1751	494	440
135°	597	1446	597	1446	597	461
145°	697	1209	697	1209	697	436
155°	796	1026	796	1026	796	366
165°	868	946	868	946	868	245
175°	905	910	905	910	905	86
180°	908	908	908	908	908	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0
2.5°	3604.3	3657.8	3610.9	3604.8	3624.0	3619.7	3613.1	3638.3	3595.5	3638.3	3604.3
5°	3591.2	3652.7	3583.0	3564.6	3596.7	3575.3	3593.9	3630.9	3577.5	3625.6	3572.1
7.5°	3568.8	3623.2	3539.8	3528.0	3559.5	3540.7	3548.6	3600.0	3555.1	3586.7	3538.1
10°	3544.7	3592.8	3509.2	3501.7	3531.0	3512.3	3520.2	3573.8	3531.0	3560.4	3511.9
12.5°	3518.5	3555.9	3472.1	3468.8	3493.9	3481.6	3485.2	3530.3	3496.0	3525.5	3479.2
15°	3465.5	3500.2	3416.3	3403.3	3430.0	3419.2	3424.5	3464.9	3438.1	3456.9	3416.3
17.5°	3399.9	3427.7	3344.2	3304.8	3305.8	3319.3	3344.2	3392.7	3368.7	3393.3	3335.9
20°	3345.2	3377.3	3285.1	3208.5	3203.1	3216.4	3285.1	3334.0	3320.6	3347.3	3266.0
22.5°	3281.8	3303.2	3219.5	3090.1	3071.9	3085.3	3210.8	3268.6	3263.8	3281.9	3180.7
25°	3183.9	3205.3	3052.8	2866.5	2607.4	2850.4	3058.2	3162.1	3162.1	3178.2	3044.6
27.5°	3084.5	3085.0	2809.0	1841.0	1623.9	1774.7	2805.2	3030.4	3056.1	3048.0	2785.5
30°	3014.5	2995.9	2489.8	1488.1	1429.4	1466.7	2492.5	2938.9	2981.7	2952.3	2427.0
32.5°	2933.6	2880.8	1838.3	1368.2	1320.1	1353.2	1777.6	2830.4	2905.2	2841.6	1908.8
35°	2801.3	2662.4	1402.0	1209.6	1161.5	1204.3	1391.2	2616.2	2765.8	2594.8	1448.5
37.5°	2658.7	2116.2	1234.2	963.5	859.8	942.7	1228.2	2093.6	2600.8	2044.9	1233.2
40°	2547.1	1662.6	1109.6	704.8	571.2	664.7	1101.4	1586.3	2476.1	1706.5	1082.3
42.5°	2398.6	1460.5	891.0	447.7	350.4	409.7	854.3	1426.8	2323.1	1478.6	861.4
45°	2137.3	1255.4	527.5	245.6	226.8	237.5	486.5	1232.3	2060.8	1205.6	538.4
47.5°	1692.9	957.4	338.9	208.7	229.0	208.7	328.5	927.1	1598.8	925.4	338.4
50°	1281.8	747.4	262.3	211.3	248.7	211.3	254.2	721.8	1216.2	788.7	259.6
52.5°	949.5	624.5	214.2	231.7	299.0	236.0	208.2	607.9	901.4	636.2	202.8
55°	639.5	489.9	172.1	305.8	410.0	313.7	172.1	475.8	606.7	470.4	166.7
57.5°	405.6	364.4	174.4	393.0	467.9	400.6	177.1	351.3	389.2	352.9	153.0
60°	300.7	287.2	194.1	417.4	502.9	422.7	196.8	276.5	295.1	273.7	164.0
62.5°	248.2	226.2	233.3	452.0	522.6	440.2	238.3	215.8	258.0	206.6	181.5
65°	224.1	146.7	276.0	457.8	516.5	457.8	278.7	138.9	235.0	149.5	246.0
67.5°	202.2	108.8	266.7	454.6	519.8	455.7	260.2	103.8	194.1	101.1	251.5
70°	169.4	97.3	251.5	462.7	500.2	446.7	251.5	94.5	161.3	91.8	295.1
72.5°	141.0	92.3	233.9	427.3	443.3	411.2	236.2	91.9	141.6	82.7	277.7
75°	120.3	90.9	224.1	341.3	325.2	325.2	218.6	88.3	123.0	83.0	215.9
77.5°	90.2	80.6	185.8	222.7	210.5	210.5	182.5	77.7	85.8	73.0	175.4
80°	68.4	73.7	153.0	163.8	155.8	155.8	147.6	71.0	68.4	68.4	144.9
82.5°	53.1	62.7	118.0	120.1	114.2	112.1	114.8	62.1	53.1	57.3	112.0
85°	30.1	43.5	62.8	51.7	43.7	41.1	60.1	40.7	27.4	40.7	60.1
87.5°	11.0	20.1	10.3	10.1	10.1	10.1	10.3	20.1	11.0	18.0	12.4
90°	0.0	3.3	7.8	6.7	6.7	6.7	7.8	3.3	0.0	3.3	7.8
92.5°	16.1	57.8	184.8	60.9	47.0	60.9	184.8	57.8	16.1	57.8	184.8
95°	47.0	143.0	636.9	227.1	139.6	227.1	636.9	143.0	47.0	143.0	636.9
97.5°	88.3	186.2	1081.0	658.4	401.9	658.4	1081.0	186.2	88.3	186.2	1081.0
100°	115.1	211.3	1248.1	1113.0	721.9	1113.0	1248.1	211.3	115.1	211.3	1248.1
102.5°	145.5	238.1	1227.6	1646.6	1252.0	1646.6	1227.6	238.1	145.5	238.1	1227.6
105°	192.2	277.4	1120.8	2140.7	2027.0	2140.7	1120.8	277.4	192.2	277.4	1120.8
107.5°	242.7	322.9	1019.3	2183.4	2303.8	2183.4	1019.3	322.9	242.7	322.9	1019.3
110°	279.4	352.5	971.1	2130.2	2347.7	2130.2	971.1	352.5	279.4	352.5	971.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	309.7	382.0	940.6	2034.3	2314.6	2034.3	940.6	382.0	309.7	382.0	940.6
115°	355.3	424.1	912.9	1881.5	2213.6	1881.5	912.9	424.1	355.3	424.1	912.9
117.5°	402.3	464.3	902.2	1741.5	2072.2	1741.5	902.2	464.3	402.3	464.3	902.2
120°	429.1	490.2	899.6	1655.5	1975.5	1655.5	899.6	490.2	429.1	490.2	899.6
122.5°	455.0	515.4	900.5	1580.8	1879.0	1580.8	900.5	515.4	455.0	515.4	900.5
125°	493.9	550.7	900.7	1485.5	1751.0	1485.5	900.7	550.7	493.9	550.7	900.7
127.5°	527.2	585.3	900.5	1414.1	1635.5	1414.1	900.5	585.3	527.2	585.3	900.5
130°	548.6	607.7	899.6	1373.3	1571.1	1373.3	899.6	607.7	548.6	607.7	899.6
132.5°	567.4	629.1	898.7	1335.5	1521.1	1335.5	898.7	629.1	567.4	629.1	898.7
135°	596.7	659.0	896.2	1282.1	1445.9	1282.1	896.2	659.0	596.7	659.0	896.2
137.5°	625.4	688.1	893.7	1227.7	1373.3	1227.7	893.7	688.1	625.4	688.1	893.7
140°	645.8	705.9	892.8	1191.0	1328.6	1191.0	892.8	705.9	645.8	705.9	892.8
142.5°	665.5	723.0	892.8	1155.8	1278.6	1155.8	892.8	723.0	665.5	723.0	892.8
145°	697.2	748.6	893.9	1104.2	1209.1	1104.2	893.9	748.6	697.2	748.6	893.9
147.5°	728.1	772.7	895.5	1060.3	1141.3	1060.3	895.5	772.7	728.1	772.7	895.5
150°	748.7	788.0	897.3	1034.0	1102.9	1034.0	897.3	788.0	748.7	788.0	897.3
152.5°	769.2	801.6	898.2	1014.1	1069.0	1014.1	898.2	801.6	769.2	801.6	898.2
155°	795.6	821.8	899.6	988.6	1025.7	988.6	899.6	821.8	795.6	821.8	899.6
157.5°	820.7	839.5	900.9	969.8	995.9	969.8	900.9	839.5	820.7	839.5	900.9
160°	835.8	851.1	901.7	958.1	978.9	958.1	901.7	851.1	835.8	851.1	901.7
162.5°	849.2	861.1	901.7	948.1	963.6	948.1	901.7	861.1	849.2	861.1	901.7
165°	868.2	875.9	901.7	935.5	946.4	935.5	901.7	875.9	868.2	875.9	901.7
167.5°	881.7	886.4	901.9	926.0	931.7	926.0	901.9	886.4	881.7	886.4	901.9
170°	890.6	892.8	902.8	919.7	921.9	919.7	902.8	892.8	890.6	892.8	902.8
172.5°	896.8	898.2	904.7	916.1	915.6	916.1	904.7	898.2	896.8	898.2	904.7
175°	905.1	905.1	905.1	911.8	909.6	911.8	905.1	905.1	905.1	905.1	905.1
177.5°	908.5	907.6	906.7	911.1	907.6	911.1	906.7	907.6	908.5	907.6	906.7
180°	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5	908.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3624.0	3624.0	3624.0	3624.0	3624.0	3624.0
2.5°	3595.9	3610.9	3610.9	3602.1	3645.0	3604.3
5°	3559.2	3593.9	3577.9	3577.5	3631.3	3591.2
7.5°	3533.5	3566.1	3551.0	3548.0	3600.8	3568.8
10°	3507.0	3531.0	3520.4	3528.3	3576.8	3544.7
12.5°	3469.9	3498.3	3487.6	3499.9	3544.1	3518.5
15°	3405.9	3430.0	3435.3	3440.9	3492.2	3465.5
17.5°	3300.2	3311.9	3338.6	3376.4	3429.8	3399.9
20°	3217.1	3233.2	3249.2	3315.2	3377.3	3345.2
22.5°	3122.6	3117.3	3154.7	3232.0	3309.7	3281.8
25°	2867.7	2662.0	2889.1	3088.3	3192.0	3183.9
27.5°	1996.7	1732.7	1966.3	2850.5	3068.5	3084.5
30°	1571.4	1448.5	1568.7	2544.4	2977.1	3014.5
32.5°	1395.2	1310.8	1384.0	1936.6	2862.0	2933.6
35°	1204.0	1145.1	1204.0	1448.5	2635.6	2801.3
37.5°	963.6	843.4	961.6	1251.7	2130.7	2658.7
40°	718.0	565.7	696.7	1120.6	1702.7	2547.1
42.5°	478.5	364.6	452.8	882.2	1472.9	2398.6
45°	258.9	226.8	248.2	532.9	1201.9	2137.3
47.5°	203.0	214.8	203.0	336.2	919.5	1692.9
50°	194.9	232.3	194.9	259.6	760.7	1281.8
52.5°	212.4	252.0	210.3	204.9	620.7	949.5
55°	240.7	371.6	243.4	166.7	455.2	639.5
57.5°	342.8	418.1	346.5	158.0	350.5	405.6
60°	352.1	451.0	349.5	166.7	271.3	300.7
62.5°	416.5	558.1	415.9	190.8	201.7	248.2
65°	534.1	587.6	539.5	243.2	143.9	224.1
67.5°	507.0	545.0	501.7	260.7	99.1	202.2
70°	498.0	527.5	492.7	297.9	92.0	169.4
72.5°	464.7	468.4	455.0	276.0	82.7	141.0
75°	360.2	336.2	346.9	237.8	82.8	120.3
77.5°	223.8	214.2	215.9	181.5	73.1	90.2
80°	169.3	164.0	161.3	153.0	68.4	68.4
82.5°	125.6	120.3	117.6	118.0	57.3	53.1
85°	57.3	51.9	49.2	68.4	40.7	30.1
87.5°	12.2	12.2	10.2	12.4	15.8	11.0
90°	6.7	6.7	6.7	7.8	3.3	0.0
92.5°	60.9	47.0	60.9	184.8	57.8	16.1
95°	227.1	139.6	227.1	636.9	143.0	47.0
97.5°	658.4	401.9	658.4	1081.0	186.2	88.3
100°	1113.0	721.9	1113.0	1248.1	211.3	115.1
102.5°	1646.6	1252.0	1646.6	1227.6	238.1	145.5
105°	2140.7	2027.0	2140.7	1120.8	277.4	192.2
107.5°	2183.4	2303.8	2183.4	1019.3	322.9	242.7
110°	2130.2	2347.7	2130.2	971.1	352.5	279.4



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CATALOG NUMBER: SQ2-FA-125U-125D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2034.3	2314.6	2034.3	940.6	382.0	309.7
115°	1881.5	2213.6	1881.5	912.9	424.1	355.3
117.5°	1741.5	2072.2	1741.5	902.2	464.3	402.3
120°	1655.5	1975.5	1655.5	899.6	490.2	429.1
122.5°	1580.8	1879.0	1580.8	900.5	515.4	455.0
125°	1485.5	1751.0	1485.5	900.7	550.7	493.9
127.5°	1414.1	1635.5	1414.1	900.5	585.3	527.2
130°	1373.3	1571.1	1373.3	899.6	607.7	548.6
132.5°	1335.5	1521.1	1335.5	898.7	629.1	567.4
135°	1282.1	1445.9	1282.1	896.2	659.0	596.7
137.5°	1227.7	1373.3	1227.7	893.7	688.1	625.4
140°	1191.0	1328.6	1191.0	892.8	705.9	645.8
142.5°	1155.8	1278.6	1155.8	892.8	723.0	665.5
145°	1104.2	1209.1	1104.2	893.9	748.6	697.2
147.5°	1060.3	1141.3	1060.3	895.5	772.7	728.1
150°	1034.0	1102.9	1034.0	897.3	788.0	748.7
152.5°	1014.1	1069.0	1014.1	898.2	801.6	769.2
155°	988.6	1025.7	988.6	899.6	821.8	795.6
157.5°	969.8	995.9	969.8	900.9	839.5	820.7
160°	958.1	978.9	958.1	901.7	851.1	835.8
162.5°	948.1	963.6	948.1	901.7	861.1	849.2
165°	935.5	946.4	935.5	901.7	875.9	868.2
167.5°	926.0	931.7	926.0	901.9	886.4	881.7
170°	919.7	921.9	919.7	902.8	892.8	890.6
172.5°	916.1	915.6	916.1	904.7	898.2	896.8
175°	911.8	909.6	911.8	905.1	905.1	905.1
177.5°	911.1	907.6	911.1	906.7	907.6	908.5
180°	908.5	908.5	908.5	908.5	908.5	908.5



TEST NUMBER: P855248

CATALOG NUMBER: SQ2-FA-125U-125D-835-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	13.92	14.67	14.91	15.66	16.96	12.77	13.52	13.76	14.51	15.81
	3H	14.61	15.28	15.61	16.28	17.60	18.92	19.59	19.92	20.59	21.91
	4H	15.02	15.66	16.03	16.66	17.99	20.19	20.83	21.21	21.83	23.16
	6H	15.37	15.96	16.39	16.96	18.30	20.80	21.38	21.82	22.39	23.73
	8H	15.49	16.04	16.52	17.06	18.40	20.92	21.47	21.95	22.49	23.83
	12H	15.56	16.08	16.59	17.10	18.46	20.96	21.48	21.99	22.50	23.86
4H	2H	14.30	14.94	15.32	15.94	17.27	13.30	13.93	14.32	14.93	16.26
	3H	15.30	15.83	16.32	16.86	18.20	19.62	20.15	20.64	21.18	22.52
	4H	15.86	16.34	16.89	17.36	18.73	21.07	21.55	22.10	22.57	23.94
	6H	16.33	16.75	17.37	17.79	19.15	21.80	22.22	22.84	23.26	24.62
	8H	16.50	16.89	17.54	17.92	19.30	21.97	22.36	23.01	23.39	24.77
	12H	16.61	16.96	17.67	18.01	19.39	22.02	22.37	23.08	23.43	24.81
8H	4H	16.95	17.34	17.99	18.38	19.75	21.19	21.57	22.23	22.61	23.99
	6H	17.56	17.88	18.62	18.96	20.33	22.06	22.38	23.13	23.46	24.83
	8H	17.79	18.07	18.87	19.14	20.53	22.31	22.59	23.39	23.66	25.05
	12H	17.96	18.21	19.04	19.27	20.70	22.43	22.68	23.51	23.73	25.17
12H	4H	17.09	17.44	18.15	18.50	19.87	21.14	21.49	22.20	22.55	23.93
	6H	17.83	18.11	18.91	19.18	20.57	22.07	22.35	23.15	23.42	24.81
	8H	18.13	18.38	19.21	19.43	20.87	22.35	22.60	23.43	23.65	25.09