



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : QD-33-LED35-SO-D9.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

IESNA:LM-63-2002[ISSUE DATE][TEST] [TEST LAB] LIGHT LABORATORY, INC.[MANUFAC] PRUDENTIAL LTG.[LUMCAT] Qua

[LUMINAIRE] 36" W x 36" L X 5"H. LED LUMINAIRE

[MORE] FWA - WHITE ACRYLIC LENS

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	14409
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	162
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.00 ft
Luminous Width (90-270)	3.00 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4657	4645	4624
55	4480	4459	4428
65	4244	4212	4185
75	3915	3865	3847
85	3383	3284	3329

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264
2.5	4175.968	4177.024	4175.824	4174.400	4175.088	4174.400	4175.824	4177.024	4175.968	4177.024
5.0	4161.184	4161.280	4160.208	4159.840	4158.528	4159.840	4160.208	4161.280	4161.184	4161.280
7.5	4135.632	4135.888	4135.216	4134.608	4134.160	4134.608	4135.216	4135.888	4135.632	4135.888
10.0	4100.544	4101.168	4099.072	4098.528	4097.504	4098.528	4099.072	4101.168	4100.544	4101.168
12.5	4055.728	4057.104	4054.480	4053.792	4052.400	4053.792	4054.480	4057.104	4055.728	4057.104
15.0	4004.400	4003.680	4002.016	3999.904	3999.456	3999.904	4002.016	4003.680	4004.400	4003.680
17.5	3941.920	3942.064	3940.752	3936.992	3936.000	3936.992	3940.752	3942.064	3941.920	3942.064
20.0	3872.880	3871.776	3869.776	3866.672	3863.488	3866.672	3869.776	3871.776	3872.880	3871.776
22.5	3793.920	3793.376	3790.160	3785.360	3783.952	3785.360	3790.160	3793.376	3793.920	3793.376
25.0	3707.520	3706.720	3702.512	3698.864	3697.168	3698.864	3702.512	3706.720	3707.520	3706.720
27.5	3612.992	3611.376	3605.728	3601.392	3598.528	3601.392	3605.728	3611.376	3612.992	3611.376
30.0	3508.336	3508.128	3503.376	3498.432	3494.992	3498.432	3503.376	3508.128	3508.336	3508.128
32.5	3398.768	3398.544	3392.656	3387.104	3386.800	3387.104	3392.656	3398.544	3398.768	3398.544
35.0	3284.976	3283.088	3276.752	3269.056	3269.856	3269.056	3276.752	3283.088	3284.976	3283.088
37.5	3163.200	3160.160	3152.960	3145.456	3145.888	3145.456	3152.960	3160.160	3163.200	3160.160
40.0	3036.384	3031.248	3024.256	3016.032	3013.440	3016.032	3024.256	3031.248	3036.384	3031.248
42.5	2898.224	2896.608	2887.456	2880.032	2878.880	2880.032	2887.456	2896.608	2898.224	2896.608
45.0	2755.792	2757.424	2748.752	2738.448	2736.576	2738.448	2748.752	2757.424	2755.792	2757.424
47.5	2610.112	2611.104	2602.480	2592.752	2590.304	2592.752	2602.480	2611.104	2610.112	2611.104
50.0	2460.320	2459.600	2451.568	2443.312	2438.448	2443.312	2451.568	2459.600	2460.320	2459.600
52.5	2306.992	2305.520	2298.096	2288.880	2284.096	2288.880	2298.096	2305.520	2306.992	2305.520
55.0	2150.624	2149.440	2140.560	2130.912	2125.776	2130.912	2140.560	2149.440	2150.624	2149.440
57.5	1988.336	1989.072	1979.664	1969.712	1965.712	1969.712	1979.664	1989.072	1988.336	1989.072
60.0	1826.016	1826.960	1818.128	1807.920	1805.920	1807.920	1818.128	1826.960	1826.016	1826.960
62.5	1663.648	1662.272	1653.776	1646.416	1643.008	1646.416	1653.776	1662.272	1663.648	1662.272
65.0	1501.216	1496.864	1489.616	1481.008	1480.224	1481.008	1489.616	1496.864	1501.216	1496.864
67.5	1336.304	1333.696	1324.912	1317.184	1316.736	1317.184	1324.912	1333.696	1336.304	1333.696
70.0	1170.224	1168.688	1158.496	1152.560	1153.344	1152.560	1158.496	1168.688	1170.224	1168.688
72.5	1007.408	1005.104	995.744	990.688	991.648	990.688	995.744	1005.104	1007.408	1005.104
75.0	848.128	844.416	837.264	832.528	833.264	832.528	837.264	844.416	848.128	844.416
77.5	691.888	687.040	679.536	677.136	676.912	677.136	679.536	687.040	691.888	687.040
80.0	537.616	533.712	525.888	524.496	524.192	524.496	525.888	533.712	537.616	533.712
82.5	387.184	386.864	378.400	377.184	380.448	377.184	378.400	386.864	387.184	386.864
85.0	246.784	245.760	239.536	240.272	242.800	240.272	239.536	245.760	246.784	245.760
87.5	117.104	117.424	108.048	109.584	110.560	109.584	108.048	117.424	117.104	117.424
90.0	118.032	121.792	105.744	56.496	14.112	56.496	105.744	121.792	118.032	121.792
92.5	160.208	149.008	112.400	64.768	29.648	64.768	112.400	149.008	160.208	149.008
95.0	160.816	151.504	118.864	76.016	52.976	76.016	118.864	151.504	160.816	151.504
97.5	178.944	169.440	135.424	91.952	72.464	91.952	135.424	169.440	178.944	169.440
100.0	200.512	190.432	156.288	111.856	98.080	111.856	156.288	190.432	200.512	190.432
102.5	223.648	214.240	177.392	133.520	124.368	133.520	177.392	214.240	223.648	214.240
105.0	248.784	239.232	199.840	157.776	148.704	157.776	199.840	239.232	248.784	239.232
107.5	271.968	260.512	223.040	183.376	177.056	183.376	223.040	260.512	271.968	260.512
110.0	293.424	282.528	248.128	210.352	206.192	210.352	248.128	282.528	293.424	282.528
112.5	315.376	305.776	272.752	238.800	226.160	238.800	272.752	305.776	315.376	305.776
115.0	341.808	331.744	300.208	265.488	263.680	265.488	300.208	331.744	341.808	331.744
117.5	369.664	359.520	328.208	295.360	291.488	295.360	328.208	359.520	369.664	359.520
120.0	396.848	389.264	355.616	324.352	316.528	324.352	355.616	389.264	396.848	389.264
122.5	424.688	416.864	386.240	359.616	345.184	359.616	386.240	416.864	424.688	416.864
125.0	451.456	444.272	416.416	386.944	383.504	386.944	416.416	444.272	451.456	444.272
127.5	481.008	473.008	445.072	414.880	404.672	414.880	445.072	473.008	481.008	473.008
130.0	509.312	501.888	476.624	446.800	436.608	446.800	476.624	501.888	509.312	501.888
132.5	538.128	529.808	510.096	474.656	473.568	474.656	510.096	529.808	538.128	529.808

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**CANDELA TABULATION - (Cont.)**

135.0	565.808	556.848	536.864	504.096	502.704	504.096	536.864	556.848	565.808	556.848
137.5	590.976	582.352	562.784	535.056	525.440	535.056	562.784	582.352	590.976	582.352
140.0	617.600	607.552	588.352	571.696	554.400	571.696	588.352	607.552	617.600	607.552
142.5	639.760	632.128	612.992	601.296	591.184	601.296	612.992	632.128	639.760	632.128
145.0	663.840	654.656	640.400	624.240	623.136	624.240	640.400	654.656	663.840	654.656
147.5	683.792	676.704	664.144	648.064	644.480	648.064	664.144	676.704	683.792	676.704
150.0	705.520	697.056	685.120	669.552	666.400	669.552	685.120	697.056	705.520	697.056
152.5	723.440	717.056	704.064	693.888	685.632	693.888	704.064	717.056	723.440	717.056
155.0	742.528	734.784	724.240	714.768	711.008	714.768	724.240	734.784	742.528	734.784
157.5	757.840	752.064	741.424	732.144	731.392	732.144	741.424	752.064	757.840	752.064
160.0	771.008	767.168	758.144	748.672	747.104	748.672	758.144	767.168	771.008	767.168
162.5	784.000	780.192	774.560	766.320	764.080	766.320	774.560	780.192	784.000	780.192
165.0	795.088	791.888	786.064	780.320	779.424	780.320	786.064	791.888	795.088	791.888
167.5	803.744	801.648	797.504	793.152	794.944	793.152	797.504	801.648	803.744	801.648
170.0	811.552	810.240	806.240	801.936	804.288	801.936	806.240	810.240	811.552	810.240
172.5	816.992	816.064	813.968	810.864	810.624	810.864	813.968	816.064	816.992	816.064
175.0	821.744	821.184	818.384	817.536	819.072	817.536	818.384	821.184	821.744	821.184
177.5	824.304	823.360	822.320	820.848	821.136	820.848	822.320	823.360	824.304	823.360
180.0	822.896	822.896	822.896	822.896	822.896	822.896	822.896	822.896	822.896	822.896

**Vert. Angles**      **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264	4181.264
2.5	4175.824	4174.400	4175.088	4174.400	4175.824	4177.024	4175.968
5.0	4160.208	4159.840	4158.528	4159.840	4160.208	4161.280	4161.184
7.5	4135.216	4134.608	4134.160	4134.608	4135.216	4135.888	4135.632
10.0	4099.072	4098.528	4097.504	4098.528	4099.072	4101.168	4100.544
12.5	4054.480	4053.792	4052.400	4053.792	4054.480	4057.104	4055.728
15.0	4002.016	3999.904	3999.456	3999.904	4002.016	4003.680	4004.400
17.5	3940.752	3936.992	3936.000	3936.992	3940.752	3942.064	3941.920
20.0	3869.776	3866.672	3863.488	3866.672	3869.776	3871.776	3872.880
22.5	3790.160	3785.360	3783.952	3785.360	3790.160	3793.376	3793.920
25.0	3702.512	3698.864	3697.168	3698.864	3702.512	3706.720	3707.520
27.5	3605.728	3601.392	3598.528	3601.392	3605.728	3611.376	3612.992
30.0	3503.376	3498.432	3494.992	3498.432	3503.376	3508.128	3508.336
32.5	3392.656	3387.104	3386.800	3387.104	3392.656	3398.544	3398.768
35.0	3276.752	3269.056	3269.856	3269.056	3276.752	3283.088	3284.976
37.5	3152.960	3145.456	3145.888	3145.456	3152.960	3160.160	3163.200
40.0	3024.256	3016.032	3013.440	3016.032	3024.256	3031.248	3036.384
42.5	2887.456	2880.032	2878.880	2880.032	2887.456	2896.608	2898.224
45.0	2748.752	2738.448	2736.576	2738.448	2748.752	2757.424	2755.792
47.5	2602.480	2592.752	2590.304	2592.752	2602.480	2611.104	2610.112
50.0	2451.568	2443.312	2438.448	2443.312	2451.568	2459.600	2460.320
52.5	2298.096	2288.880	2284.096	2288.880	2298.096	2305.520	2306.992
55.0	2140.560	2130.912	2125.776	2130.912	2140.560	2149.440	2150.624
57.5	1979.664	1969.712	1965.712	1969.712	1979.664	1989.072	1988.336
60.0	1818.128	1807.920	1805.920	1807.920	1818.128	1826.960	1826.016
62.5	1653.776	1646.416	1643.008	1646.416	1653.776	1662.272	1663.648
65.0	1489.616	1481.008	1480.224	1481.008	1489.616	1496.864	1501.216
67.5	1324.912	1317.184	1316.736	1317.184	1324.912	1333.696	1336.304
70.0	1158.496	1152.560	1153.344	1152.560	1158.496	1168.688	1170.224
72.5	995.744	990.688	991.648	990.688	995.744	1005.104	1007.408
75.0	837.264	832.528	833.264	832.528	837.264	844.416	848.128
77.5	679.536	677.136	676.912	677.136	679.536	687.040	691.888
80.0	525.888	524.496	524.192	524.496	525.888	533.712	537.616

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**CANDELA TABULATION - (Cont.)**

82.5	378.400	377.184	380.448	377.184	378.400	386.864	387.184
85.0	239.536	240.272	242.800	240.272	239.536	245.760	246.784
87.5	108.048	109.584	110.560	109.584	108.048	117.424	117.104
90.0	105.744	56.496	14.112	56.496	105.744	121.792	118.032
92.5	112.400	64.768	29.648	64.768	112.400	149.008	160.208
95.0	118.864	76.016	52.976	76.016	118.864	151.504	160.816
97.5	135.424	91.952	72.464	91.952	135.424	169.440	178.944
100.0	156.288	111.856	98.080	111.856	156.288	190.432	200.512
102.5	177.392	133.520	124.368	133.520	177.392	214.240	223.648
105.0	199.840	157.776	148.704	157.776	199.840	239.232	248.784
107.5	223.040	183.376	177.056	183.376	223.040	260.512	271.968
110.0	248.128	210.352	206.192	210.352	248.128	282.528	293.424
112.5	272.752	238.800	226.160	238.800	272.752	305.776	315.376
115.0	300.208	265.488	263.680	265.488	300.208	331.744	341.808
117.5	328.208	295.360	291.488	295.360	328.208	359.520	369.664
120.0	355.616	324.352	316.528	324.352	355.616	389.264	396.848
122.5	386.240	359.616	345.184	359.616	386.240	416.864	424.688
125.0	416.416	386.944	383.504	386.944	416.416	444.272	451.456
127.5	445.072	414.880	404.672	414.880	445.072	473.008	481.008
130.0	476.624	446.800	436.608	446.800	476.624	501.888	509.312
132.5	510.096	474.656	473.568	474.656	510.096	529.808	538.128
135.0	536.864	504.096	502.704	504.096	536.864	556.848	565.808
137.5	562.784	535.056	525.440	535.056	562.784	582.352	590.976
140.0	588.352	571.696	554.400	571.696	588.352	607.552	617.600
142.5	612.992	601.296	591.184	601.296	612.992	632.128	639.760
145.0	640.400	624.240	623.136	624.240	640.400	654.656	663.840
147.5	664.144	648.064	644.480	648.064	664.144	676.704	683.792
150.0	685.120	669.552	666.400	669.552	685.120	697.056	705.520
152.5	704.064	693.888	685.632	693.888	704.064	717.056	723.440
155.0	724.240	714.768	711.008	714.768	724.240	734.784	742.528
157.5	741.424	732.144	731.392	732.144	741.424	752.064	757.840
160.0	758.144	748.672	747.104	748.672	758.144	767.168	771.008
162.5	774.560	766.320	764.080	766.320	774.560	780.192	784.000
165.0	786.064	780.320	779.424	780.320	786.064	791.888	795.088
167.5	797.504	793.152	794.944	793.152	797.504	801.648	803.744
170.0	806.240	801.936	804.288	801.936	806.240	810.240	811.552
172.5	813.968	810.864	810.624	810.864	813.968	816.064	816.992
175.0	818.384	817.536	819.072	817.536	818.384	821.184	821.744
177.5	822.320	820.848	821.136	820.848	822.320	823.360	824.304
180.0	822.896	822.896	822.896	822.896	822.896	822.896	822.896

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1524.38	N.A.	10.60
0-30	3230.18	N.A.	22.40
0-40	5279.5	N.A.	36.60
0-60	9310.52	N.A.	64.60
0-80	11671.87	N.A.	81.00
0-90	11956.14	N.A.	83.00
10-90	11560.94	N.A.	80.20
20-40	3755.12	N.A.	26.10
20-50	5873.96	N.A.	40.80
40-70	5505.36	N.A.	38.20
60-80	2361.35	N.A.	16.40
70-80	887.02	N.A.	6.20
80-90	284.27	N.A.	2.00
90-110	338.10	N.A.	2.30
90-120	635.82	N.A.	4.40
90-130	1007.75	N.A.	7.00
90-150	1819.02	N.A.	12.60
90-180	2452.54	N.A.	17.00
110-180	2114.44	N.A.	14.70
0-180	14408.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	395.20
10-20	1129.18
20-30	1705.8
30-40	2049.31
40-50	2118.84
50-60	1912.19
60-70	1474.33
70-80	887.02
80-90	284.27
90-100	127.84
100-110	210.25
110-120	297.73
120-130	371.92
130-140	411.06
140-150	400.22
150-160	333.87
160-170	221.86
170-180	77.79

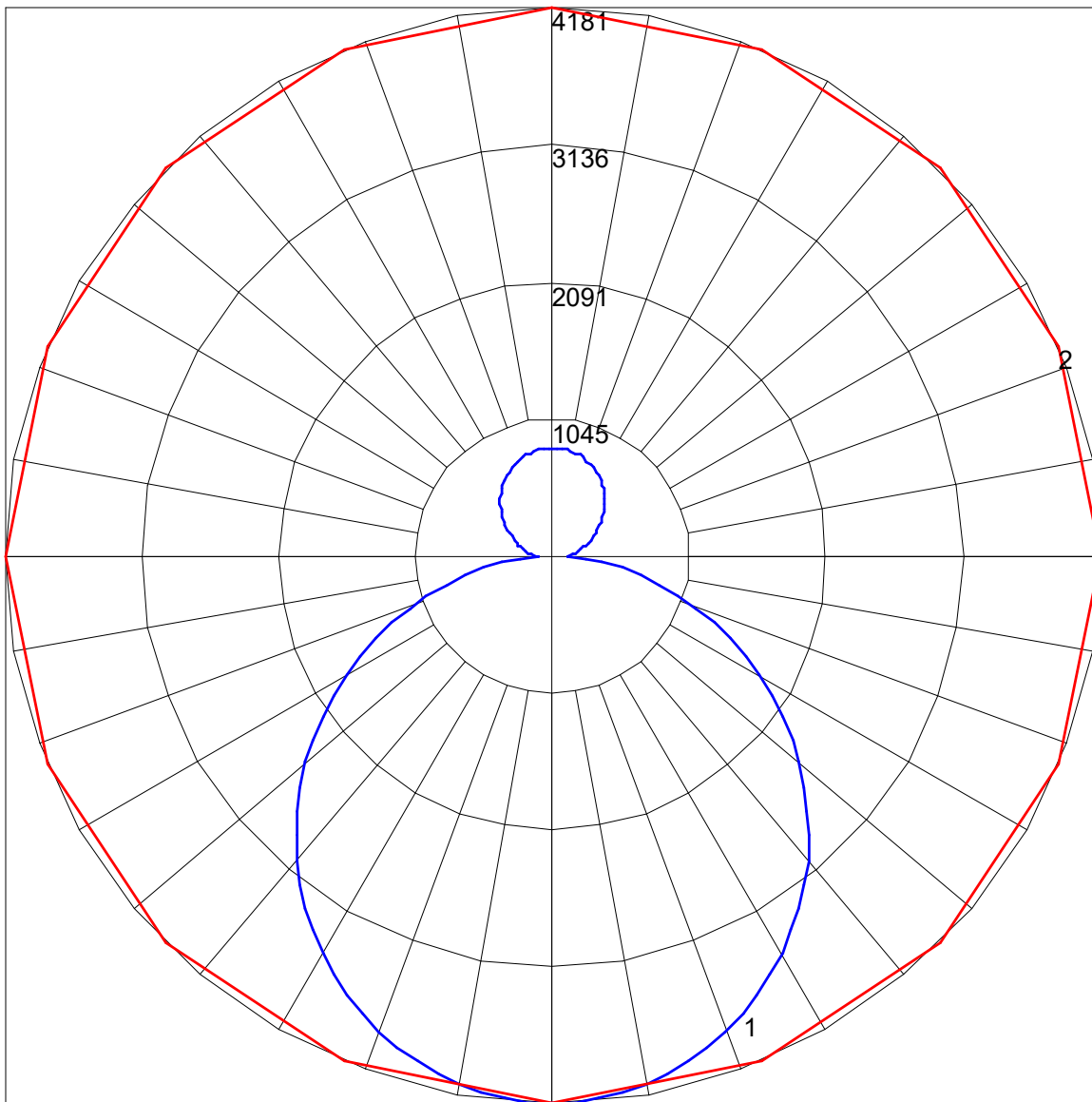
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

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
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	86	86	86	83
1	105	100	96	92	100	96	92	89	89	86	83	82	80	77	76	74	72	69
2	95	87	80	75	91	84	78	72	77	72	68	72	68	64	66	63	60	57
3	87	76	68	62	83	73	66	60	68	62	57	63	58	54	58	54	51	48
4	79	67	59	52	76	65	57	51	60	54	48	56	50	46	52	47	44	41
5	73	60	51	45	69	58	50	44	54	47	42	50	44	40	47	42	38	35
6	67	54	45	39	64	52	44	38	49	42	36	45	39	35	42	37	33	31
7	62	49	40	34	59	47	39	34	44	37	32	41	35	31	39	33	30	27
8	58	45	36	30	55	43	35	30	40	34	29	38	32	28	35	30	26	24
9	54	41	33	27	52	40	32	27	37	30	26	35	29	25	33	28	24	22
10	50	38	30	25	48	36	29	24	34	28	23	32	27	22	30	25	22	20

POLAR GRAPH



Maximum Candela = 4181.264 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)