



IES INDOOR REPORT

PHOTOMETRIC FILENAME : P4040-LED35-MO-FWA-D9.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] P4040-LED35-MO-FWA -D9
 [TESTLAB] Intertek
 [ISSUE DATE] November 28, 2017
 [MANUFAC] Prudential Ltg

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	14225
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	142
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	Circular w/ Sides
Luminous Length (0-180)	3.88 ft (Diameter)
Luminous Width (90-270)	3.88 ft (Diameter)
Luminous Height	0.50 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2721	2716	2707
55	2472	2457	2445
65	2136	2117	2091
75	1650	1626	1580
85	794	772	720

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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	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899
2.5	3723.788	3725.321	3725.993	3727.249	3728.139	3727.249	3725.993	3725.321	3723.788	3725.321
5.0	3706.984	3711.583	3710.517	3712.561	3714.649	3712.561	3710.517	3711.583	3706.984	3711.583
7.5	3687.376	3689.303	3688.909	3689.318	3690.807	3689.318	3688.909	3689.303	3687.376	3689.303
10.0	3651.796	3657.388	3656.059	3656.570	3654.614	3656.570	3656.059	3657.388	3651.796	3657.388
12.5	3614.113	3615.690	3615.398	3615.048	3615.106	3615.048	3615.398	3615.690	3614.113	3615.690
15.0	3565.831	3568.094	3567.977	3566.882	3564.050	3566.882	3567.977	3568.094	3565.831	3568.094
17.5	3511.125	3512.599	3511.446	3511.811	3509.329	3511.811	3511.446	3512.599	3511.125	3512.599
20.0	3448.403	3450.914	3448.184	3447.702	3445.147	3447.702	3448.184	3450.914	3448.403	3450.914
22.5	3376.995	3380.557	3378.046	3377.491	3373.826	3377.491	3378.046	3380.557	3376.995	3380.557
25.0	3298.739	3302.491	3300.593	3299.206	3298.286	3299.206	3300.593	3302.491	3298.739	3302.491
27.5	3217.855	3219.388	3216.906	3215.811	3214.380	3215.811	3216.906	3219.388	3217.855	3219.388
30.0	3122.444	3128.853	3124.458	3124.663	3121.100	3124.663	3124.458	3128.853	3122.444	3128.853
32.5	3023.558	3031.427	3029.018	3026.974	3023.543	3026.974	3029.018	3031.427	3023.558	3031.427
35.0	2924.030	2929.008	2924.730	2922.029	2918.861	2922.029	2924.730	2929.008	2924.030	2929.008
37.5	2818.837	2818.734	2815.610	2813.216	2808.617	2813.216	2815.610	2818.734	2818.837	2818.734
40.0	2705.643	2703.745	2699.584	2695.306	2691.890	2695.306	2699.584	2703.745	2705.643	2703.745
42.5	2584.901	2583.222	2579.265	2573.907	2572.374	2573.907	2579.265	2583.222	2584.901	2583.222
45.0	2456.348	2456.479	2451.968	2447.500	2444.317	2447.500	2451.968	2456.479	2456.348	2456.479
47.5	2324.685	2326.671	2320.451	2317.049	2313.531	2317.049	2320.451	2326.671	2324.685	2326.671
50.0	2193.446	2192.847	2185.401	2180.904	2178.262	2180.904	2185.401	2192.847	2193.446	2192.847
52.5	2059.899	2055.943	2048.847	2042.233	2038.540	2042.233	2048.847	2055.943	2059.899	2055.943
55.0	1919.900	1916.352	1908.089	1900.321	1898.803	1900.321	1908.089	1916.352	1919.900	1916.352
57.5	1776.236	1772.104	1765.140	1756.979	1754.336	1756.979	1765.140	1772.104	1776.236	1772.104
60.0	1628.878	1627.126	1620.571	1611.256	1607.051	1611.256	1620.571	1627.126	1628.878	1627.126
62.5	1484.309	1481.798	1474.323	1463.227	1459.416	1463.227	1474.323	1481.798	1484.309	1481.798
65.0	1338.937	1334.659	1326.571	1314.934	1310.613	1314.934	1326.571	1334.659	1338.937	1334.659
67.5	1195.360	1187.520	1179.826	1166.306	1161.445	1166.306	1179.826	1187.520	1195.360	1187.520
70.0	1045.302	1041.564	1034.454	1019.036	1013.853	1019.036	1034.454	1041.564	1045.302	1041.564
72.5	899.448	896.148	888.921	872.102	865.678	872.102	888.921	896.148	899.448	896.148
75.0	755.667	753.608	744.279	728.861	723.342	728.861	744.279	753.608	755.667	753.608
77.5	617.522	613.258	605.783	589.329	585.270	589.329	605.783	613.258	617.522	613.258
80.0	481.946	474.850	468.426	453.987	449.972	453.987	468.426	474.850	481.946	474.850
82.5	346.400	342.691	337.698	323.784	319.229	323.784	337.698	342.691	346.400	342.691
85.0	218.504	215.934	212.445	200.852	198.078	200.852	212.445	215.934	218.504	215.934
87.5	100.039	100.521	103.178	108.128	115.369	108.128	103.178	100.521	100.039	100.521
90.0	16.732	58.926	102.054	119.370	115.924	119.370	102.054	58.926	16.732	58.926
92.5	30.894	79.745	147.343	195.801	208.094	195.801	147.343	79.745	30.894	79.745
95.0	61.539	101.528	173.521	230.505	249.310	230.505	173.521	101.528	61.539	101.528
97.5	95.134	126.859	200.020	259.427	279.298	259.427	200.020	126.859	95.134	126.859
100.0	125.122	155.183	228.913	289.051	309.520	289.051	228.913	155.183	125.122	155.183
102.5	163.768	186.238	258.946	320.528	343.582	320.528	258.946	186.238	163.768	186.238
105.0	197.421	220.621	290.715	353.218	374.899	353.218	290.715	220.621	197.421	220.621
107.5	235.177	255.193	324.514	386.506	408.099	386.506	324.514	255.193	235.177	255.193
110.0	277.911	294.132	360.781	421.706	443.198	421.706	360.781	294.132	277.911	294.132
112.5	316.513	335.829	395.645	456.425	479.245	456.425	395.645	335.829	316.513	335.829
115.0	359.686	375.687	433.109	494.546	516.577	494.546	433.109	375.687	359.686	375.687
117.5	405.778	417.356	473.317	532.958	553.909	532.958	473.317	417.356	405.778	417.356
120.0	445.315	463.462	516.490	572.232	593.665	572.232	516.490	463.462	445.315	463.462
122.5	487.655	511.642	558.961	612.718	634.823	612.718	558.961	511.642	487.655	511.642
125.0	537.835	555.910	602.630	653.277	673.805	653.277	602.630	555.910	537.835	555.910
127.5	583.927	597.155	648.634	694.464	714.290	694.464	648.634	597.155	583.927	597.155
130.0	632.224	638.706	695.632	736.044	754.689	736.044	695.632	638.706	632.224	638.706
132.5	670.680	683.937	741.636	778.282	796.853	778.282	741.636	683.937	670.680	683.937

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CANDELA TABULATION - (Cont.)

135.0	715.196	730.905	782.852	817.381	835.485	817.381	782.852	730.905	715.196	730.905
137.5	760.981	778.487	822.433	857.254	874.160	857.254	822.433	778.487	760.981	778.487
140.0	807.380	825.104	859.239	895.345	910.660	895.345	859.239	825.104	807.380	825.104
142.5	855.385	868.802	897.024	931.641	945.408	931.641	897.024	868.802	855.385	868.802
145.0	898.557	909.565	933.261	966.549	979.967	966.549	933.261	909.565	898.557	909.565
147.5	934.940	945.467	968.695	998.114	1010.057	998.114	968.695	945.467	934.940	945.467
150.0	971.805	977.674	1003.108	1029.884	1038.717	1029.884	1003.108	977.674	971.805	977.674
152.5	1003.589	1010.758	1034.717	1057.931	1066.618	1057.931	1034.717	1010.758	1003.589	1010.758
155.0	1034.644	1043.112	1063.391	1084.298	1090.722	1084.298	1063.391	1043.112	1034.644	1043.112
157.5	1066.924	1074.312	1091.160	1107.994	1114.024	1107.994	1091.160	1074.312	1066.924	1074.312
160.0	1095.686	1101.117	1115.951	1130.011	1134.829	1130.011	1115.951	1101.117	1095.686	1101.117
162.5	1122.025	1126.098	1138.844	1149.706	1153.196	1149.706	1138.844	1126.098	1122.025	1126.098
165.0	1145.764	1148.188	1158.145	1165.883	1168.467	1165.883	1158.145	1148.188	1145.764	1148.188
167.5	1166.175	1167.723	1174.658	1180.644	1182.585	1180.644	1174.658	1167.723	1166.175	1167.723
170.0	1182.308	1184.075	1188.571	1193.010	1193.784	1193.010	1188.571	1184.075	1182.308	1184.075
172.5	1195.521	1197.375	1199.448	1203.420	1202.675	1203.420	1199.448	1197.375	1195.521	1197.375
175.0	1204.237	1205.989	1207.756	1209.157	1209.260	1209.157	1207.756	1205.989	1204.237	1205.989
177.5	1210.574	1211.698	1211.829	1213.406	1212.588	1213.406	1211.829	1211.698	1210.574	1211.698
180.0	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275

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	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899	3730.899
2.5	3725.993	3727.249	3728.139	3727.249	3725.993	3725.321	3723.788
5.0	3710.517	3712.561	3714.649	3712.561	3710.517	3711.583	3706.984
7.5	3688.909	3689.318	3690.807	3689.318	3688.909	3689.303	3687.376
10.0	3656.059	3656.570	3654.614	3656.570	3656.059	3657.388	3651.796
12.5	3615.398	3615.048	3615.106	3615.048	3615.398	3615.690	3614.113
15.0	3567.977	3566.882	3564.050	3566.882	3567.977	3568.094	3565.831
17.5	3511.446	3511.811	3509.329	3511.811	3511.446	3512.599	3511.125
20.0	3448.184	3447.702	3445.147	3447.702	3448.184	3450.914	3448.403
22.5	3378.046	3377.491	3373.826	3377.491	3378.046	3380.557	3376.995
25.0	3300.593	3299.206	3298.286	3299.206	3300.593	3302.491	3298.739
27.5	3216.906	3215.811	3214.380	3215.811	3216.906	3219.388	3217.855
30.0	3124.458	3124.663	3121.100	3124.663	3124.458	3128.853	3122.444
32.5	3029.018	3026.974	3023.543	3026.974	3029.018	3031.427	3023.558
35.0	2924.730	2922.029	2918.861	2922.029	2924.730	2929.008	2924.030
37.5	2815.610	2813.216	2808.617	2813.216	2815.610	2818.734	2818.837
40.0	2699.584	2695.306	2691.890	2695.306	2699.584	2703.745	2705.643
42.5	2579.265	2573.907	2572.374	2573.907	2579.265	2583.222	2584.901
45.0	2451.968	2447.500	2444.317	2447.500	2451.968	2456.479	2456.348
47.5	2320.451	2317.049	2313.531	2317.049	2320.451	2326.671	2324.685
50.0	2185.401	2180.904	2178.262	2180.904	2185.401	2192.847	2193.446
52.5	2048.847	2042.233	2038.540	2042.233	2048.847	2055.943	2059.899
55.0	1908.089	1900.321	1898.803	1900.321	1908.089	1916.352	1919.900
57.5	1765.140	1756.979	1754.336	1756.979	1765.140	1772.104	1776.236
60.0	1620.571	1611.256	1607.051	1611.256	1620.571	1627.126	1628.878
62.5	1474.323	1463.227	1459.416	1463.227	1474.323	1481.798	1484.309
65.0	1326.571	1314.934	1310.613	1314.934	1326.571	1334.659	1338.937
67.5	1179.826	1166.306	1161.445	1166.306	1179.826	1187.520	1195.360
70.0	1034.454	1019.036	1013.853	1019.036	1034.454	1041.564	1045.302
72.5	888.921	872.102	865.678	872.102	888.921	896.148	899.448
75.0	744.279	728.861	723.342	728.861	744.279	753.608	755.667
77.5	605.783	589.329	585.270	589.329	605.783	613.258	617.522
80.0	468.426	453.987	449.972	453.987	468.426	474.850	481.946

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CANDELA TABULATION - (Cont.)

82.5	337.698	323.784	319.229	323.784	337.698	342.691	346.400
85.0	212.445	200.852	198.078	200.852	212.445	215.934	218.504
87.5	103.178	108.128	115.369	108.128	103.178	100.521	100.039
90.0	102.054	119.370	115.924	119.370	102.054	58.926	16.732
92.5	147.343	195.801	208.094	195.801	147.343	79.745	30.894
95.0	173.521	230.505	249.310	230.505	173.521	101.528	61.539
97.5	200.020	259.427	279.298	259.427	200.020	126.859	95.134
100.0	228.913	289.051	309.520	289.051	228.913	155.183	125.122
102.5	258.946	320.528	343.582	320.528	258.946	186.238	163.768
105.0	290.715	353.218	374.899	353.218	290.715	220.621	197.421
107.5	324.514	386.506	408.099	386.506	324.514	255.193	235.177
110.0	360.781	421.706	443.198	421.706	360.781	294.132	277.911
112.5	395.645	456.425	479.245	456.425	395.645	335.829	316.513
115.0	433.109	494.546	516.577	494.546	433.109	375.687	359.686
117.5	473.317	532.958	553.909	532.958	473.317	417.356	405.778
120.0	516.490	572.232	593.665	572.232	516.490	463.462	445.315
122.5	558.961	612.718	634.823	612.718	558.961	511.642	487.655
125.0	602.630	653.277	673.805	653.277	602.630	555.910	537.835
127.5	648.634	694.464	714.290	694.464	648.634	597.155	583.927
130.0	695.632	736.044	754.689	736.044	695.632	638.706	632.224
132.5	741.636	778.282	796.853	778.282	741.636	683.937	670.680
135.0	782.852	817.381	835.485	817.381	782.852	730.905	715.196
137.5	822.433	857.254	874.160	857.254	822.433	778.487	760.981
140.0	859.239	895.345	910.660	895.345	859.239	825.104	807.380
142.5	897.024	931.641	945.408	931.641	897.024	868.802	855.385
145.0	933.261	966.549	979.967	966.549	933.261	909.565	898.557
147.5	968.695	998.114	1010.057	998.114	968.695	945.467	934.940
150.0	1003.108	1029.884	1038.717	1029.884	1003.108	977.674	971.805
152.5	1034.717	1057.931	1066.618	1057.931	1034.717	1010.758	1003.589
155.0	1063.391	1084.298	1090.722	1084.298	1063.391	1043.112	1034.644
157.5	1091.160	1107.994	1114.024	1107.994	1091.160	1074.312	1066.924
160.0	1115.951	1130.011	1134.829	1130.011	1115.951	1101.117	1095.686
162.5	1138.844	1149.706	1153.196	1149.706	1138.844	1126.098	1122.025
165.0	1158.145	1165.883	1168.467	1165.883	1158.145	1148.188	1145.764
167.5	1174.658	1180.644	1182.585	1180.644	1174.658	1167.723	1166.175
170.0	1188.571	1193.010	1193.784	1193.010	1188.571	1184.075	1182.308
172.5	1199.448	1203.420	1202.675	1203.420	1199.448	1197.375	1195.521
175.0	1207.756	1209.157	1209.260	1209.157	1207.756	1205.989	1204.237
177.5	1211.829	1213.406	1212.588	1213.406	1211.829	1211.698	1210.574
180.0	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275	1213.275

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1359.11	N.A.	9.60
0-30	2880.09	N.A.	20.20
0-40	4709.15	N.A.	33.10
0-60	8305.34	N.A.	58.40
0-80	10402.42	N.A.	73.10
0-90	10654.11	N.A.	74.90
10-90	10301.55	N.A.	72.40
20-40	3350.04	N.A.	23.50
20-50	5240.83	N.A.	36.80
40-70	4907.99	N.A.	34.50
60-80	2097.08	N.A.	14.70
70-80	785.27	N.A.	5.50
80-90	251.69	N.A.	1.80
90-110	481.89	N.A.	3.40
90-120	914.23	N.A.	6.40
90-130	1454.94	N.A.	10.20
90-150	2639.92	N.A.	18.60
90-180	3571.19	N.A.	25.10
110-180	3089.31	N.A.	21.70
0-180	14225.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	352.55
10-20	1006.56
20-30	1520.98
30-40	1829.06
40-50	1890.79
50-60	1705.4
60-70	1311.81
70-80	785.27
80-90	251.69
90-100	176.82
100-110	305.06
110-120	432.35
120-130	540.70
130-140	599.43
140-150	585.55
150-160	490.13
160-170	326.48
170-180	114.66

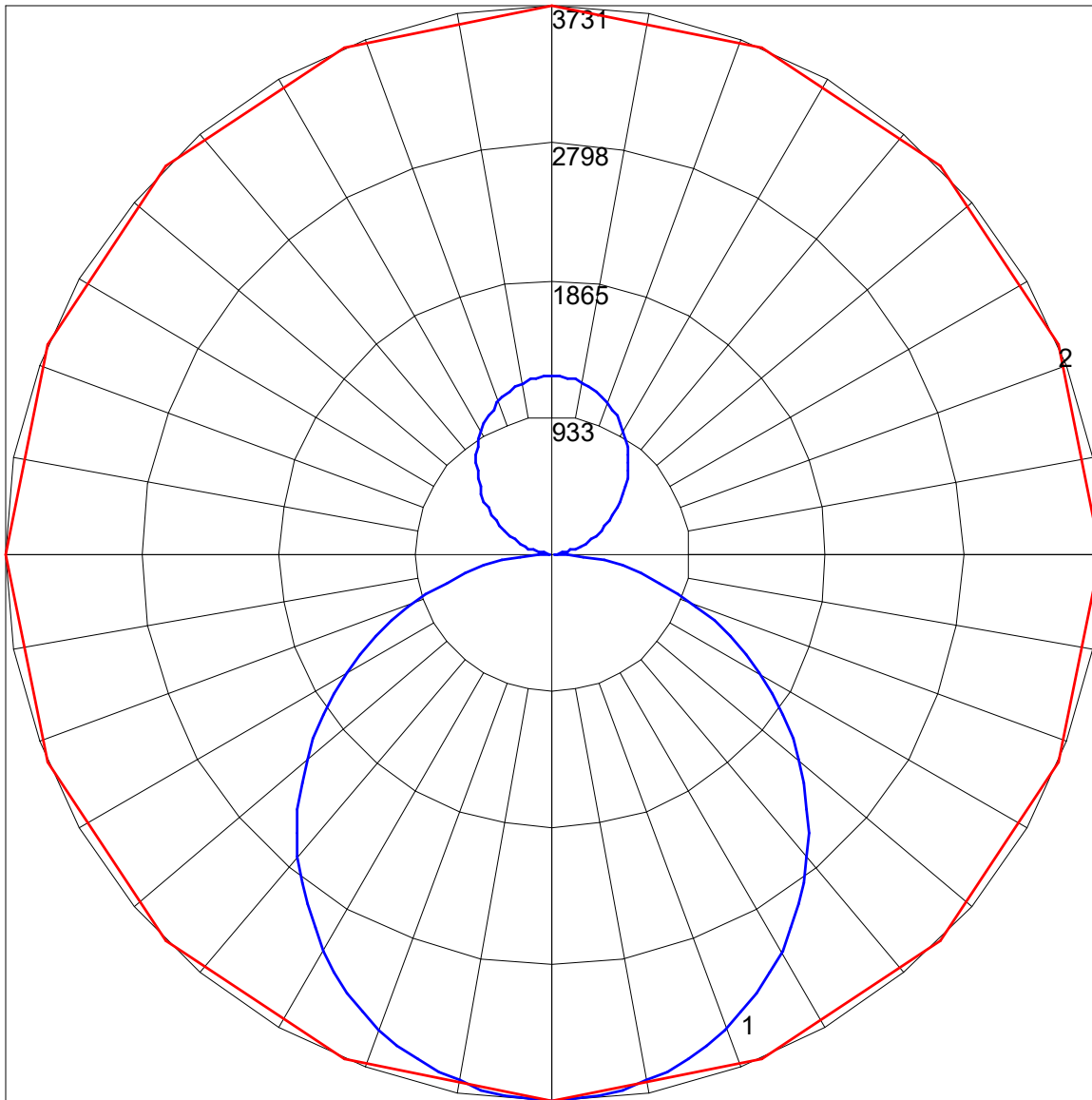
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	113	113	113	113	108	108	108	108	97	97	97	88	88	88	79	79	79	75
1	103	98	94	90	98	94	90	86	85	82	79	77	74	72	69	68	66	62
2	94	86	79	73	89	82	76	71	74	69	65	67	63	60	61	58	55	52
3	85	75	67	61	81	72	64	59	65	59	54	59	54	50	53	50	47	43
4	78	66	58	51	74	63	56	50	58	51	46	52	47	43	48	43	40	37
5	72	59	50	44	68	57	49	43	52	45	40	47	42	37	43	38	35	32
6	66	53	44	38	62	51	43	37	47	40	35	42	37	33	39	34	30	28
7	61	48	40	34	58	46	38	33	42	36	31	39	33	29	35	31	27	25
8	57	44	35	30	54	42	34	29	39	32	27	35	30	26	32	28	24	22
9	53	40	32	27	50	38	31	26	35	29	25	33	27	23	30	25	22	20
10	49	37	29	24	47	35	28	23	33	26	22	30	25	21	28	23	20	18

POLAR GRAPH



Maximum Candela = 3730.899 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.)