

IES INDOOR REPORT
PHOTOMETRIC FILENAME : RSL2-BK-35K-B-CL-12-BK.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 3299
 [ECN] 3314
 [TESTLAB] Tempo LLC
 [ISSUE DATE] 12/7/2017 12:17:56 PM
 [MANUFAC] Tempo LLC
 [LUMCAT] RSL2-BK-35K-B-CL-12-BK
 [LUMINAIRE] Black aluminum housing with baffle and clear lens, no graphic black plate
 [LAMP] Three (3) white LEDs (3500K)
 [ELECTRICALS] 12.08 VAC, 0.04 A, 0.9309 PF, 18% ATHD

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	18
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	37
Total Luminaire Watts	0.48
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	2.12
Spacing Criterion (90-270)	0.88
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.11 ft
Luminous Width (90-270)	0.25 ft
Luminous Height	0.02 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5889	4864	196
55	6801	4858	140
65	5164	3351	105
75	337	410	111
85	98	96	154

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CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
2.5	8.49	8.50	8.51	8.52	8.51	8.51	8.51	8.50	8.51	8.50
5.0	8.68	8.74	8.78	8.82	8.86	8.89	8.91	8.92	8.90	8.87
7.5	9.00	9.05	9.08	9.11	9.13	9.15	9.18	9.24	9.31	9.34
10.0	9.56	9.65	9.71	9.76	9.78	9.76	9.70	9.63	9.53	9.50
12.5	10.89	10.92	10.86	10.80	10.72	10.62	10.50	10.35	10.19	10.06
15.0	11.68	11.68	11.63	11.56	11.42	11.28	11.16	11.08	11.06	10.77
17.5	11.33	11.36	11.40	11.49	11.63	11.80	11.69	11.39	11.23	11.22
20.0	12.00	11.99	11.88	11.73	11.56	11.45	11.56	11.69	11.52	11.27
22.5	12.25	12.25	12.25	12.26	12.23	12.05	11.64	11.41	11.40	11.37
25.0	12.34	12.26	12.16	12.07	12.05	12.14	12.11	11.78	11.41	11.28
27.5	12.64	12.51	12.36	12.23	12.08	11.89	11.82	11.87	11.69	11.35
30.0	12.95	12.82	12.68	12.49	12.26	12.14	11.88	11.67	11.65	11.43
32.5	12.45	12.49	12.53	12.55	12.44	12.32	12.19	11.87	11.53	11.52
35.0	12.24	12.34	12.41	12.47	12.34	12.20	12.14	12.10	11.65	11.37
37.5	12.63	12.70	12.73	12.67	12.41	12.22	11.97	11.86	11.78	11.38
40.0	13.09	13.04	12.97	12.91	12.68	12.33	12.09	11.76	11.66	11.27
42.5	13.34	13.09	12.92	12.96	12.85	12.61	12.12	11.94	11.37	11.14
45.0	13.11	12.88	12.64	12.80	12.93	12.62	12.14	11.88	11.51	10.88
47.5	12.50	12.66	12.72	12.69	12.79	12.70	12.17	11.69	11.44	10.75
50.0	12.56	12.86	12.95	12.84	12.64	12.62	12.32	11.70	11.31	10.69
52.5	13.10	13.31	13.24	12.99	12.69	12.42	12.32	11.85	11.17	10.00
55.0	13.09	13.20	13.19	12.98	12.51	12.30	12.13	11.81	10.93	9.41
57.5	12.65	12.52	12.47	12.49	12.31	11.92	11.83	11.74	10.89	9.00
60.0	11.95	11.35	11.30	11.48	11.73	11.27	11.42	11.58	10.83	8.50
62.5	10.41	9.17	9.24	9.79	10.04	10.07	10.35	10.95	10.30	7.01
65.0	8.08	6.73	6.96	7.74	7.73	7.95	8.60	9.60	8.42	5.29
67.5	5.44	4.51	4.68	5.07	4.82	5.25	6.08	6.71	6.19	3.43
70.0	3.35	2.25	2.36	2.45	2.59	2.64	3.40	3.92	3.83	2.54
72.5	2.01	1.09	1.07	1.11	1.14	1.31	1.50	1.77	2.33	1.61
75.0	0.39	0.25	0.29	0.41	0.50	0.60	0.56	0.93	1.04	0.48
77.5	0.16	0.13	0.12	0.12	0.21	0.30	0.30	0.33	0.20	0.17
80.0	0.10	0.09	0.09	0.09	0.10	0.13	0.10	0.15	0.15	0.13
82.5	0.08	0.08	0.09	0.08	0.08	0.08	0.08	0.10	0.10	0.09
85.0	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
87.5	0.06	0.00	0.07	0.00	0.06	0.06	0.06	0.06	0.06	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0.0	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
2.5	8.49	8.49	8.49	8.49	8.47	8.45	8.43	8.44	8.44	8.46
5.0	8.82	8.76	8.69	8.65	8.63	8.62	8.62	8.58	8.58	8.60
7.5	9.32	9.26	9.15	8.98	8.83	8.76	8.76	8.75	8.72	8.70
10.0	9.59	9.73	9.69	9.51	9.29	8.96	8.87	8.90	8.86	8.78
12.5	9.91	9.70	9.69	9.53	9.16	8.72	8.44	8.40	8.36	8.38
15.0	10.26	9.79	9.28	9.02	8.74	8.34	7.98	7.90	7.86	7.98
17.5	11.10	10.40	9.47	8.76	8.28	7.87	7.51	7.41	7.36	7.63
20.0	11.30	11.25	10.17	8.88	8.00	7.32	6.99	6.90	6.86	7.25
22.5	11.20	11.40	11.23	9.27	7.83	6.85	6.34	6.09	5.87	6.02
25.0	11.11	10.94	10.59	9.33	7.50	6.47	5.74	5.29	4.88	4.73
27.5	11.27	10.76	9.79	8.91	7.16	6.03	5.19	4.50	3.88	3.44
30.0	11.24	11.27	9.67	8.07	6.70	5.54	4.69	3.73	2.89	2.11

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32.5	11.09	11.38	10.45	7.49	5.98	4.69	3.87	2.99	2.30	1.66
35.0	11.27	10.96	10.59	6.89	4.88	3.66	2.91	2.21	1.71	1.25
37.5	11.16	10.16	9.53	6.43	3.73	2.58	1.88	1.40	1.11	0.86
40.0	10.58	9.76	8.64	5.73	2.64	1.44	0.82	0.58	0.51	0.48
42.5	10.33	9.27	8.15	5.03	1.83	0.92	0.58	0.49	0.46	0.42
45.0	10.12	8.88	7.25	4.58	1.65	0.81	0.51	0.43	0.40	0.37
47.5	9.98	7.79	5.69	3.72	1.37	0.67	0.44	0.37	0.35	0.32
50.0	8.82	6.46	4.19	2.48	0.91	0.50	0.36	0.31	0.29	0.28
52.5	7.68	5.02	2.68	0.94	0.43	0.41	0.34	0.29	0.27	0.24
55.0	6.86	3.71	1.72	0.75	0.42	0.39	0.32	0.27	0.24	0.22
57.5	6.34	3.16	1.48	0.67	0.40	0.37	0.31	0.25	0.21	0.19
60.0	5.30	2.47	1.10	0.54	0.38	0.35	0.30	0.23	0.18	0.16
62.5	3.91	1.57	0.59	0.36	0.36	0.34	0.28	0.21	0.16	0.14
65.0	2.36	0.59	0.35	0.35	0.35	0.33	0.26	0.19	0.14	0.13
67.5	1.52	0.56	0.35	0.34	0.34	0.31	0.25	0.17	0.12	0.11
70.0	1.18	0.47	0.33	0.33	0.33	0.29	0.24	0.14	0.09	0.10
72.5	0.69	0.34	0.32	0.31	0.31	0.27	0.22	0.14	0.10	0.10
75.0	0.20	0.24	0.27	0.27	0.27	0.24	0.20	0.13	0.10	0.11
77.5	0.16	0.19	0.22	0.23	0.24	0.21	0.17	0.13	0.10	0.11
80.0	0.13	0.15	0.17	0.19	0.20	0.18	0.15	0.12	0.10	0.12
82.5	0.09	0.11	0.13	0.16	0.17	0.16	0.13	0.10	0.09	0.10
85.0	0.08	0.09	0.11	0.13	0.14	0.13	0.11	0.09	0.07	0.09
87.5	0.07	0.08	0.09	0.10	0.10	0.09	0.08	0.07	0.06	0.08
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0.0	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
2.5	8.49	8.49	8.48	8.47	8.40	8.35	8.28	8.22	8.16	8.12
5.0	8.58	8.50	8.37	8.24	8.12	8.05	8.01	8.01	7.97	7.95
7.5	8.60	8.42	8.26	8.12	8.04	7.93	7.79	7.65	7.51	7.36
10.0	8.60	8.39	8.16	7.99	7.79	7.62	7.40	7.21	7.05	6.93
12.5	8.19	7.96	7.82	7.65	7.49	7.30	7.24	7.12	6.75	6.44
15.0	7.78	7.59	7.48	7.26	7.07	7.12	6.74	6.26	6.53	4.98
17.5	7.36	7.31	7.14	6.89	6.86	6.22	6.08	4.87	3.22	2.63
20.0	7.01	7.07	6.74	6.73	6.03	5.63	3.72	2.66	1.30	0.72
22.5	5.85	5.94	5.98	5.81	5.52	3.43	2.20	0.78	0.50	0.34
25.0	4.54	4.54	4.83	4.54	3.27	2.26	0.65	0.39	0.24	0.18
27.5	3.21	3.23	3.47	3.28	1.99	0.68	0.34	0.19	0.14	0.12
30.0	1.84	2.05	2.18	1.63	0.98	0.33	0.18	0.12	0.09	0.08
32.5	1.36	1.50	1.46	0.73	0.41	0.17	0.11	0.09	0.07	0.05
35.0	1.04	1.16	1.07	0.58	0.21	0.11	0.08	0.06	0.05	0.04
37.5	0.74	0.78	0.56	0.33	0.12	0.09	0.06	0.05	0.04	0.03
40.0	0.45	0.43	0.30	0.18	0.10	0.07	0.05	0.04	0.03	0.03
42.5	0.36	0.28	0.18	0.12	0.08	0.06	0.04	0.04	0.03	0.02
45.0	0.32	0.24	0.15	0.10	0.07	0.05	0.04	0.03	0.03	0.00
47.5	0.28	0.20	0.13	0.08	0.06	0.04	0.03	0.03	0.02	0.00
50.0	0.25	0.17	0.11	0.07	0.05	0.04	0.03	0.02	0.00	0.00
52.5	0.21	0.15	0.09	0.07	0.04	0.03	0.03	0.00	0.00	0.00
55.0	0.19	0.13	0.08	0.06	0.04	0.03	0.02	0.00	0.00	0.00
57.5	0.15	0.11	0.08	0.06	0.04	0.03	0.00	0.00	0.00	0.00
60.0	0.13	0.10	0.07	0.04	0.03	0.02	0.00	0.00	0.00	0.00
62.5	0.12	0.10	0.07	0.04	0.03	0.00	0.00	0.00	0.00	0.00
65.0	0.11	0.10	0.08	0.04	0.03	0.00	0.00	0.00	0.00	0.00
67.5	0.11	0.10	0.07	0.04	0.03	0.00	0.00	0.00	0.00	0.00

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70.0	0.10	0.10	0.08	0.04	0.03	0.00	0.00	0.00	0.00	0.00
72.5	0.11	0.20	0.25	0.05	0.03	0.00	0.00	0.00	0.00	0.00
75.0	0.13	0.37	0.52	0.09	0.03	0.00	0.00	0.00	0.00	0.00
77.5	0.14	0.56	0.79	0.10	0.00	0.00	0.00	0.00	0.00	0.00
80.0	0.16	0.79	1.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00
82.5	0.14	0.69	0.87	0.11	0.00	0.00	0.00	0.00	0.00	0.00
85.0	0.12	0.50	0.59	0.11	0.00	0.00	0.00	0.00	0.00	0.00
87.5	0.10	0.30	0.33	0.11	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0.0	8.30	8.30	8.30	8.30	8.30	8.30	8.30
2.5	8.07	8.02	7.99	7.96	7.94	7.92	7.90
5.0	7.87	7.82	7.77	7.73	7.70	7.67	7.66
7.5	7.21	7.09	7.01	6.90	6.81	6.75	6.70
10.0	6.78	6.60	6.43	6.38	6.40	6.43	6.44
12.5	6.29	5.76	4.77	3.84	2.86	2.25	1.84
15.0	3.21	2.52	2.02	1.35	0.90	0.59	0.38
17.5	1.56	0.80	0.56	0.43	0.35	0.29	0.24
20.0	0.52	0.38	0.29	0.23	0.19	0.16	0.14
22.5	0.26	0.21	0.18	0.14	0.12	0.10	0.09
25.0	0.16	0.14	0.11	0.09	0.07	0.07	0.06
27.5	0.10	0.08	0.07	0.05	0.05	0.04	0.03
30.0	0.06	0.05	0.04	0.03	0.03	0.03	0.02
32.5	0.04	0.03	0.03	0.03	0.02	0.00	0.00
35.0	0.03	0.03	0.02	0.02	0.00	0.00	0.00
37.5	0.03	0.02	0.00	0.00	0.00	0.00	0.00
40.0	0.02	0.00	0.00	0.00	0.00	0.00	0.00
42.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2.94	N.A.	16.50
0-30	5.71	N.A.	32.10
0-40	8.76	N.A.	49.20
0-60	15.26	N.A.	85.70
0-80	17.72	N.A.	99.50
0-90	17.81	N.A.	100.00
10-90	17.01	N.A.	95.50
20-40	5.83	N.A.	32.70
20-50	9.09	N.A.	51.00
40-70	8.60	N.A.	48.30
60-80	2.46	N.A.	13.80
70-80	0.36	N.A.	2.00
80-90	0.09	N.A.	0.50
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	17.81	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	0.80
10-20	2.13
20-30	2.77
30-40	3.06
40-50	3.26
50-60	3.24
60-70	2.10
70-80	0.36
80-90	0.09
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

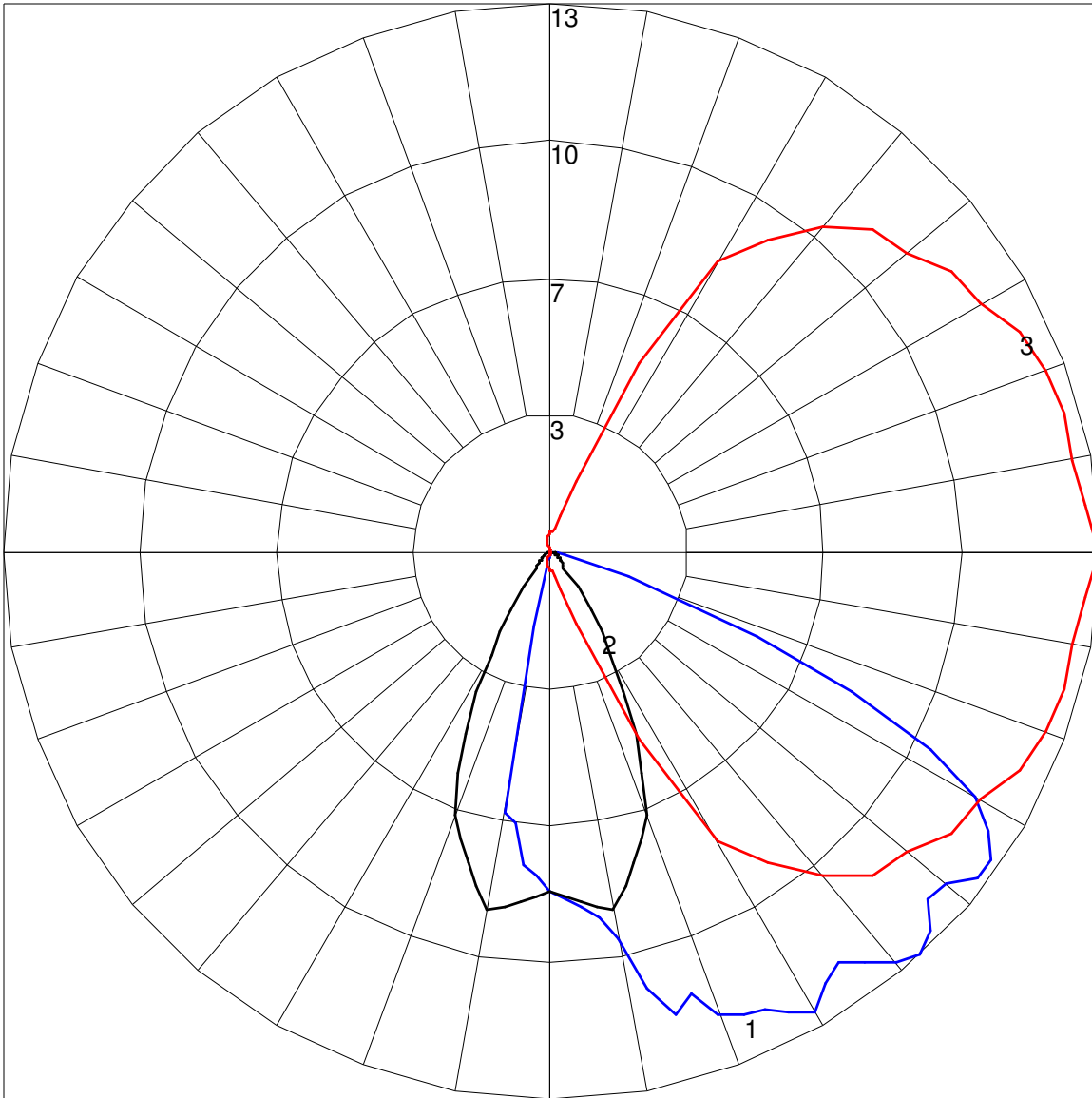
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	118	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	109	105	101	98	98	106	103	99	96	99	96	93	95	93	91	91	89	88	86
2	100	93	87	81	81	97	91	85	80	87	83	79	84	80	77	81	78	75	73
3	92	82	75	69	69	89	80	74	68	78	72	67	75	70	66	72	68	65	63
4	84	73	65	59	59	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	65	57	51	51	76	64	56	51	62	55	50	60	54	49	59	53	49	47
6	72	59	51	45	45	70	58	50	44	56	49	44	55	49	44	53	48	43	41
7	67	54	45	40	40	65	53	45	39	52	44	39	50	44	39	49	43	39	37
8	62	49	41	36	36	61	49	41	35	47	40	35	46	40	35	45	39	35	33
9	58	45	37	32	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	29	53	41	34	29	41	34	29	40	33	29	39	33	29	27

POLAR GRAPH



Maximum Candela = 13.34 Located At Horizontal Angle = 0, Vertical Angle = 42.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Horizontal Cone Through Vertical Angle (42.5) (Through Max. Cd.)