

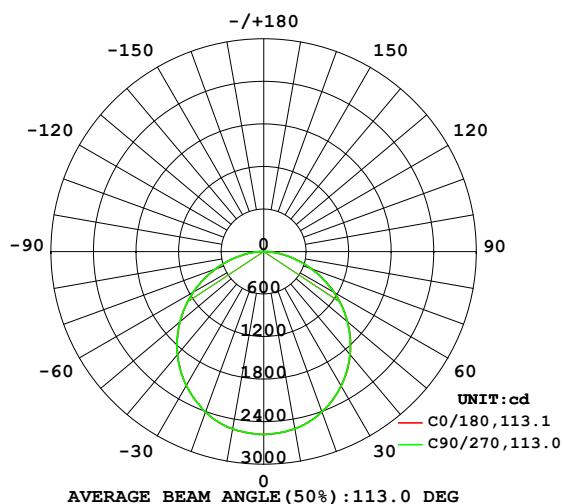
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		

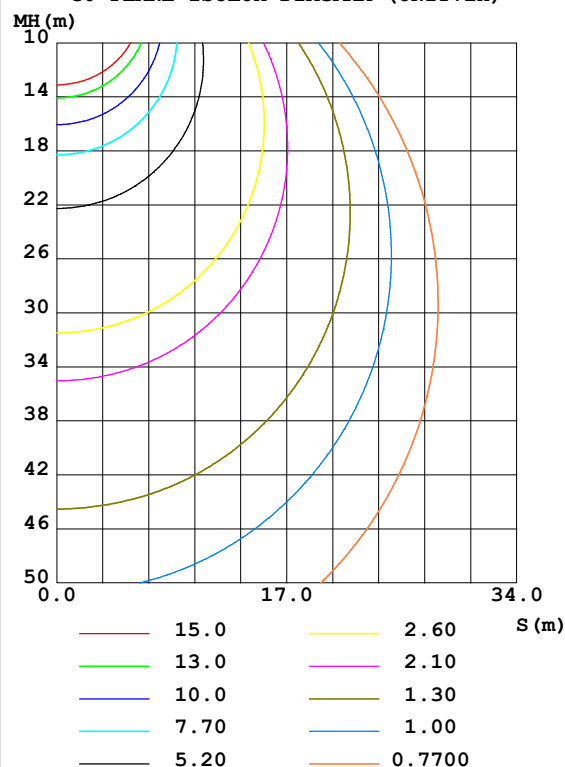
CLE Quadra 4000

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.75 lm/W			
MODEL: 401mm 2500lm 840 ADV		Imax(cd)	2578	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	7453.8	η UP,DN(C0-180)	0.0,49.8
NOMINAL FLUX(lm)	7453.76	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature: 25.3DEG
Operators: JEFF
Test Date: 10 July 2023

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.892m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	2566	2566	2564	2564	2567	2567	2566	2565	0- 5	61.48	61.48	0.82,0.82
10	2536	2536	2537	2539	2541	2539	2538	2539	5- 10	182.6	244.1	3.27,3.27
15	2483	2482	2483	2484	2487	2487	2486	2486	10- 15	298.0	542.1	7.27,7.27
20	2405	2403	2405	2406	2410	2410	2410	2409	15- 20	403.2	945.3	12.7,12.7
25	2306	2303	2304	2307	2301	2302	2301	2300	20- 25	493.8	1439	19.3,19.3
30	2187	2184	2185	2187	2183	2185	2184	2182	25- 30	567.9	2007	26.9,26.9
35	2050	2046	2047	2050	2046	2050	2048	2046	30- 35	623.2	2630	35.3,35.3
40	1896	1891	1892	1896	1893	1897	1896	1893	35- 40	657.7	3288	44.1,44.1
45	1727	1721	1722	1726	1725	1730	1728	1725	40- 45	670.2	3958	53.1,53.1
50	1545	1539	1539	1544	1544	1548	1547	1544	45- 50	660.5	4619	62,62
55	1351	1344	1345	1350	1350	1355	1354	1351	50- 55	629.0	5248	70.4,70.4
60	1147	1140	1140	1146	1148	1153	1152	1148	55- 60	577.0	5825	78.1,78.1
65	932.6	926.2	926.5	931.8	938.1	943.8	942.6	938.9	60- 65	505.7	6330	84.9,84.9
70	721.4	714.8	715.5	720.4	726.3	732.3	731.2	727.3	65- 70	419.7	6750	90.6,90.6
75	513.0	506.4	507.4	512.0	517.8	523.4	522.5	518.6	70- 75	323.3	7073	94.9,94.9
80	315.5	309.9	310.8	314.8	319.8	325.2	324.2	320.4	75- 80	222.0	7295	97.9,97.9
85	138.0	133.4	134.2	137.6	141.8	146.0	145.0	141.8	80- 85	123.0	7418	99.5,99.5
90	2.167	2.102	2.109	2.157	2.670	4.067	3.418	2.436	85- 90	35.52	7454	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 3958 lm

%lum = 53.1%

%lamp = 53.1%

Conical surface Flux(120deg): 5824.6 lm

%lum = 78.1%

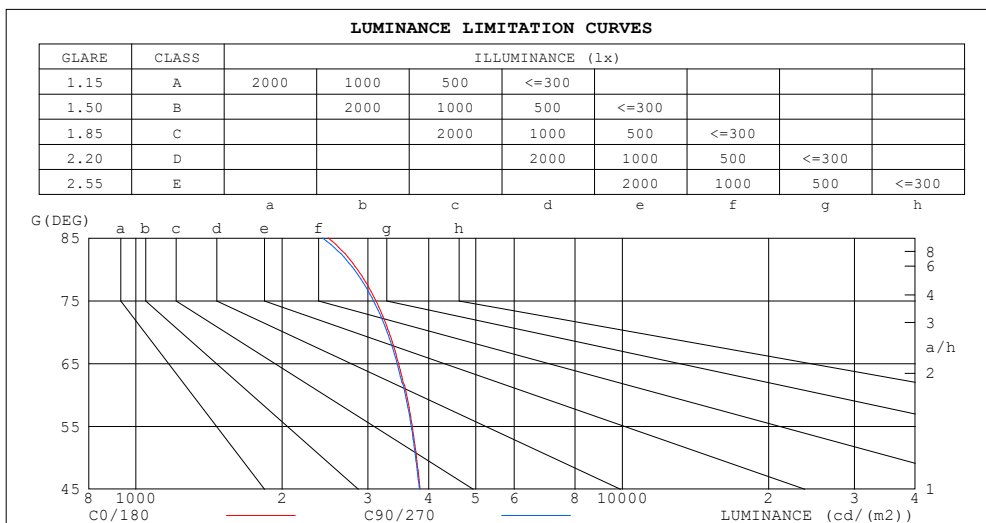
%lamp = 78.1%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature:25.3DEG
Operators:JEFF
Test Date:10 July 2023

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2488	2420
80	2856	2813
75	3115	3081
70	3315	3288
65	3469	3445
60	3606	3584
55	3702	3684
50	3778	3762
45	3839	3828

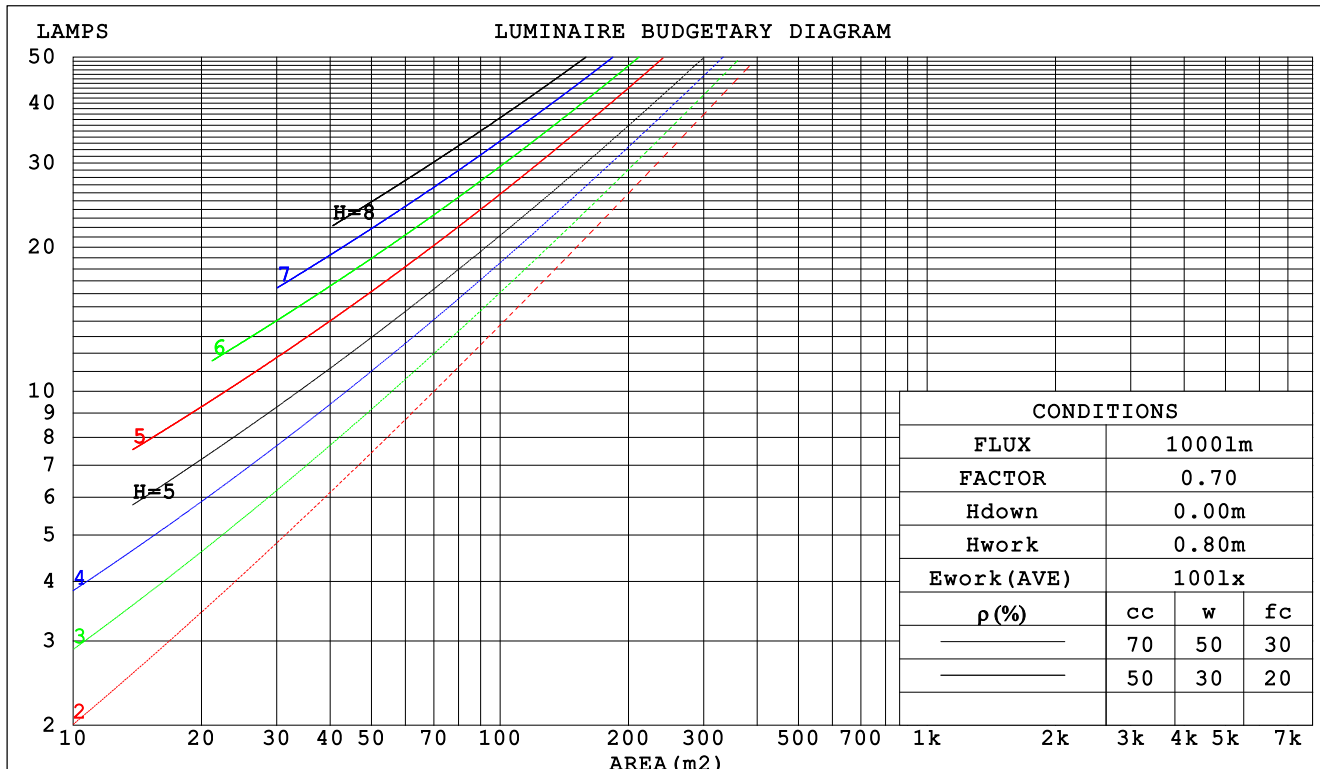
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γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.90	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.85	.79	.75	.81	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.64	.77	.70	.64	.74	.68	.62	.72	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.69	.60	.54	.66	.59	.53	.64	.57	.52	.62	.56	.52	.49
5.0	.62	.53	.47	.61	.53	.46	.59	.52	.46	.57	.51	.45	.55	.49	.45	.43
6.0	.56	.47	.41	.55	.47	.40	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.35	.47	.40	.35	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.43	.34	.29	.42	.34	.29	.41	.34	.28	.40	.33	.28	.39	.33	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature:25.3DEG
Operators:JEFF
Test Date:10 July 2023

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.314	.179	.057	.307	.175	.056	.294	.169	.054	.282	.162	.052	.270	.157	.051	
2.0	.295	.161	.050	.288	.159	.049	.277	.154	.048	.266	.149	.047	.256	.145	.046	
3.0	.272	.145	.043	.267	.143	.043	.256	.139	.042	.247	.135	.041	.238	.132	.041	
4.0	.251	.130	.038	.246	.129	.038	.237	.126	.037	.228	.123	.037	.220	.120	.036	
5.0	.232	.118	.034	.227	.117	.034	.219	.114	.034	.211	.112	.033	.204	.109	.033	
6.0	.215	.108	.031	.211	.106	.031	.204	.104	.030	.197	.102	.030	.190	.100	.030	
7.0	.200	.099	.028	.196	.098	.028	.190	.096	.028	.184	.094	.027	.178	.092	.027	
8.0	.186	.091	.026	.183	.090	.026	.177	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.175	.084	.024	.172	.084	.024	.167	.082	.023	.162	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.075	.021	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.019	.017	.015	
2.0	.173	.132	.098	.148	.114	.084	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.050	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature:25.3DEG
Operators:JEFF
Test Date:10 July 2023

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm										
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80										
MFR.: DARKON										
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working 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	17.4	18.9	17.7	19.1	19.3	17.4	18.9	17.6	19.1	19.3
3H	18.9	20.4	19.2	20.6	20.8	18.9	20.3	19.2	20.6	20.8
4H	19.6	20.9	19.9	21.2	21.4	19.5	20.9	19.8	21.1	21.4
6H	20.0	21.3	20.4	21.6	21.9	20.0	21.3	20.3	21.5	21.8
8H	20.2	21.4	20.5	21.7	22.0	20.1	21.4	20.5	21.6	21.9
12H	20.3	21.5	20.6	21.8	22.1	20.2	21.4	20.6	21.7	22.0
4H 2H	18.0	19.4	18.3	19.6	19.9	18.0	19.3	18.3	19.6	19.8
3H	19.7	20.9	20.1	21.2	21.5	19.7	20.9	20.1	21.2	21.5
4H	20.5	21.6	20.9	21.9	22.2	20.5	21.5	20.8	21.9	22.2
6H	21.1	22.0	21.5	22.4	22.8	21.0	22.0	21.4	22.4	22.7
8H	21.3	22.2	21.7	22.6	22.9	21.3	22.2	21.7	22.5	22.9
12H	21.4	22.3	21.9	22.6	23.1	21.4	22.2	21.8	22.6	23.0
8H 4H	20.8	21.7	21.2	22.0	22.4	20.7	21.6	21.2	22.0	22.4
6H	21.5	22.3	22.0	22.7	23.1	21.5	22.2	21.9	22.6	23.1
8H	21.8	22.5	22.3	22.9	23.4	21.8	22.4	22.2	22.9	23.3
12H	22.0	22.6	22.5	23.1	23.5	22.0	22.6	22.5	23.0	23.5
12H 4H	20.8	21.6	21.2	22.0	22.4	20.8	21.6	21.2	22.0	22.4
6H	21.6	22.2	22.0	22.7	23.1	21.5	22.2	22.0	22.6	23.1
8H	21.9	22.5	22.4	22.9	23.4	21.9	22.5	22.4	22.9	23.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 7454 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.0)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature:25.3DEG
Operators:JEFF
Test Date:10 July 2023

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		

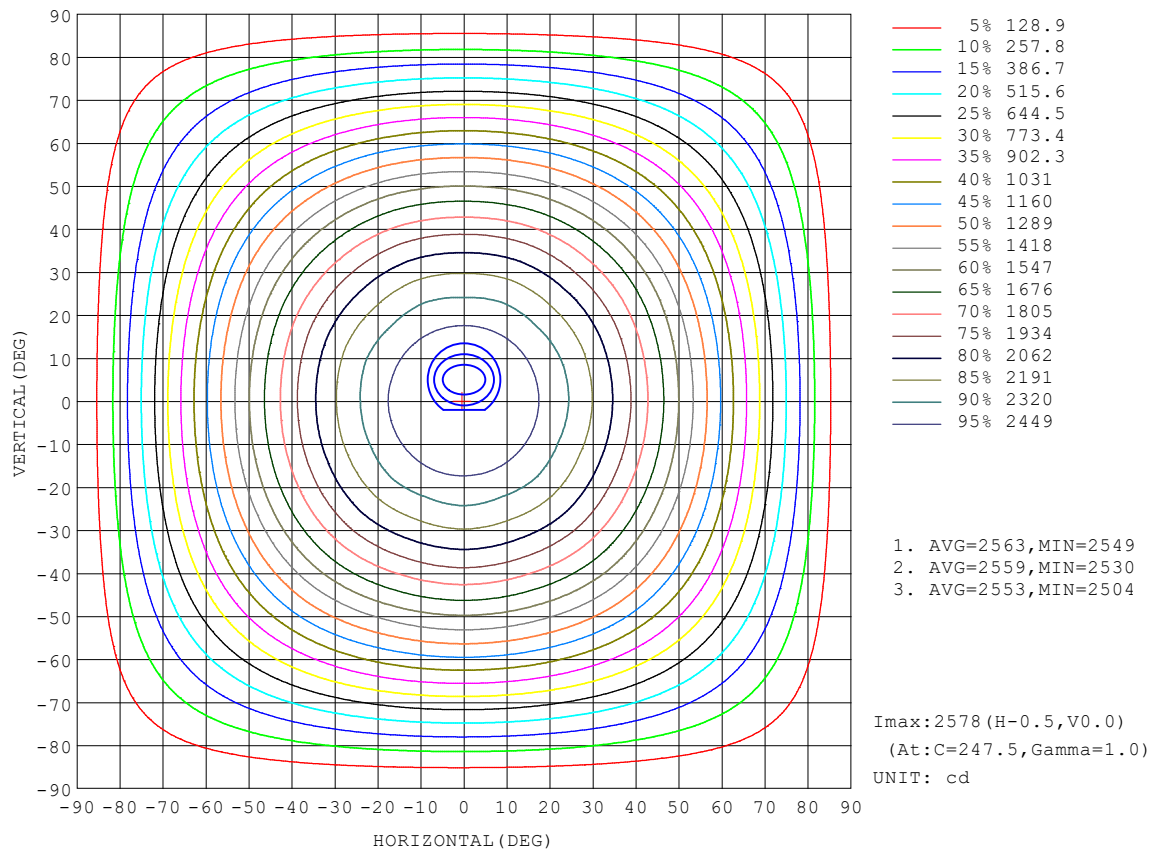
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	56	45	38	55	45	38	32
0.80	67	56	48	66	55	48	64	54	48	41
1.00	76	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	65	79	70	64	56
1.50	88	78	71	86	77	70	83	75	69	62
2.00	95	86	79	93	85	79	89	83	77	69
2.50	99	91	85	97	89	84	93	87	82	74
3.00	102	95	89	100	93	88	96	91	86	78
4.00	106	100	96	104	98	94	99	95	91	83
5.00	108	104	99	106	102	98	102	98	95	86
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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ISOCANDELA DIAGRAM

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MFR.: DARKON		

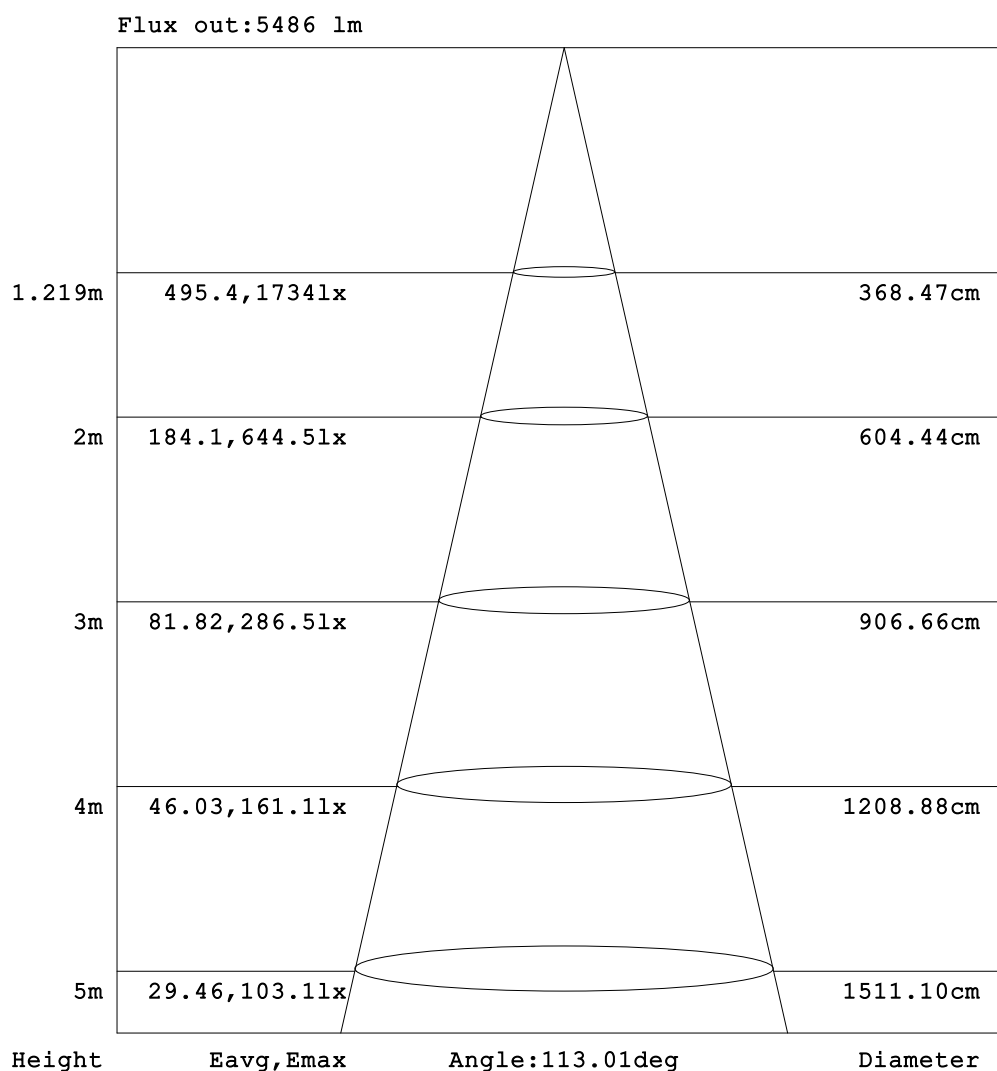


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Remarks:

AAI Figure

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		



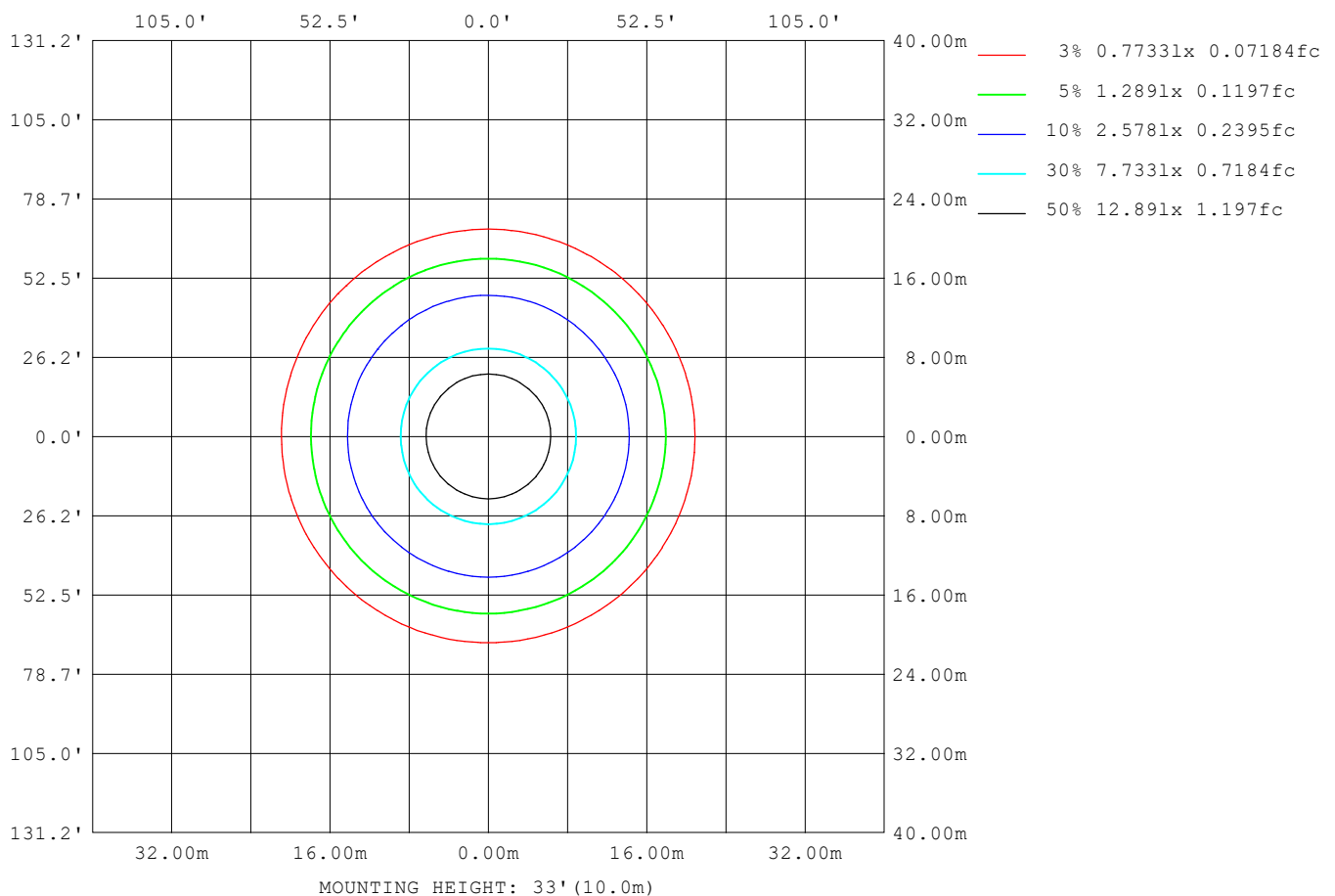
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 22.5DEG
Test Speed: LOW
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Humidity:65.0%
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Remarks:

ISOLUX DIAGRAM

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
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MFR.: DARKON		



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Humidity:65.0%
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Remarks:

LED Avg.L Report

Test:U:240.0V I:0.3048A P:71.84W PF:0.9820 Lamp Flux:7453.76x1 lm		
NAME: MRS SPIN 900_NA_WHT_550mA_4000K CRI80		
MFR.: DARKON		

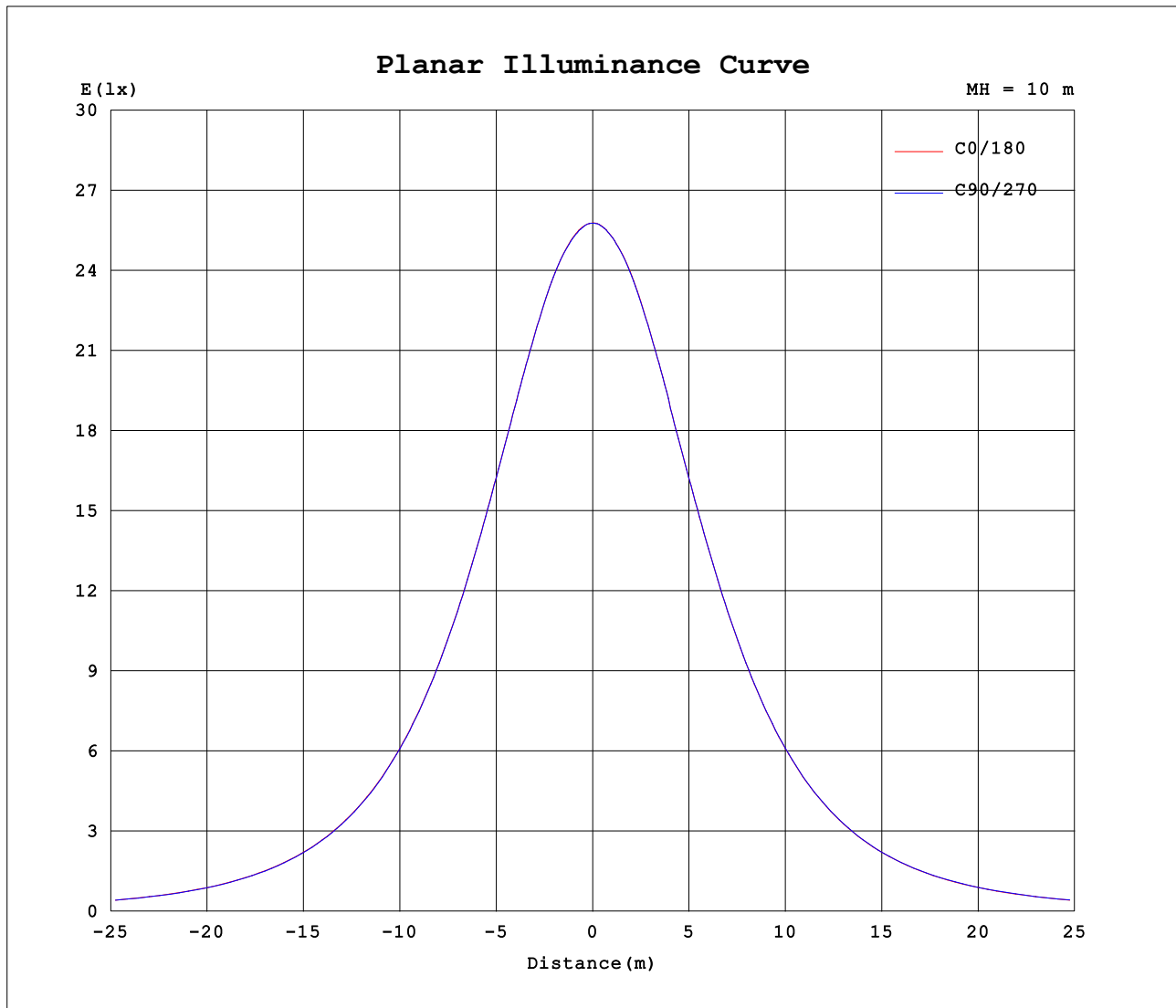
AvgL	cd/m2
L_0~180 (65) av	3478
L_0~180 (75) av	3130
L_0~180 (85) av	2522
L_90~270 (65) av	3475
L_90~270 (75) av	3127
L_90~270 (85) av	2517
L_45 (65) av	3478
L_45 (75) av	3128
L_45 (85) av	2519

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature:25.3DEG
Operators:JEFF
Test Date:10 July 2023

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.892m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: LOW
Temperature: 25.3DEG
Operators: JEFF
Test Date: 10 July 2023

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.892m [K=1.0000]
Remarks:

