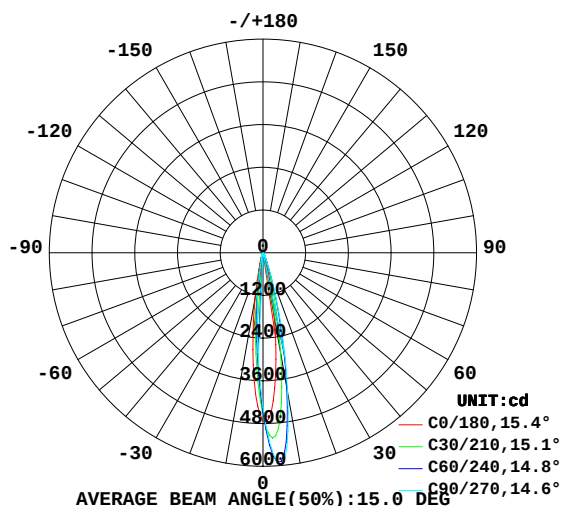


LUMINAIRE PHOTOMETRIC TEST REPORT

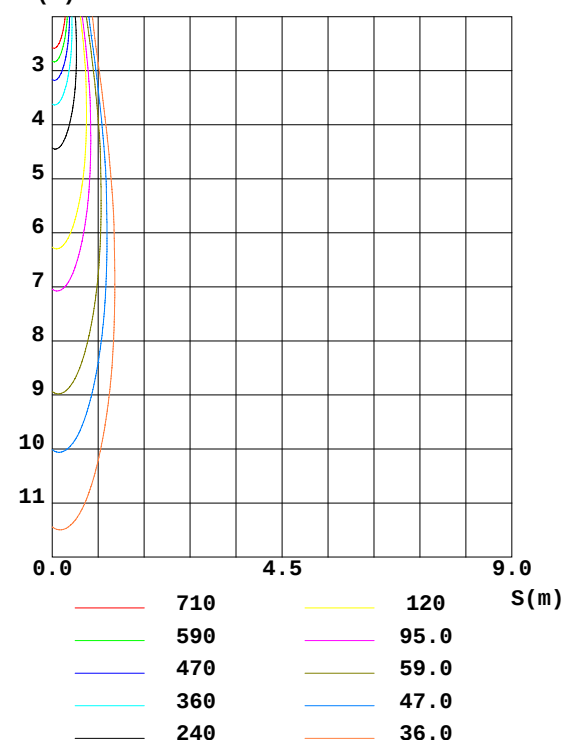
NAME: CL-Spot92-R-uls 3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 40.91 lm/W			
MODEL		I _{max} (cd)	6091	S/MH(C0/180)	0.30
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.42
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	598.89	η UP, DN(C0-180)	0.1, 72.7
NOMINAL FLUX(lm)	598.893	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.2, 26.9
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	24	η down(%)	99.6	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [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
10	1826	3402	4008	2606	1274	700.5	561.4	790.3	0- 10	288.0	288.0	48.1, 48.1
20	217.9	414.3	495.3	310.4	168.7	129.7	113.3	134.8	10- 20	210.1	498.0	83.2, 83.2
30	73.30	108.4	110.5	94.26	60.68	43.04	37.01	48.62	20- 30	59.67	557.7	93.1, 93.1
40	21.42	32.66	36.73	32.61	17.78	11.48	8.983	13.21	30- 40	26.33	584.0	97.5, 97.5
50	4.957	8.184	9.458	6.666	4.172	3.381	2.343	3.534	40- 50	9.103	593.2	99, 99
60	1.659	2.390	1.947	2.320	1.324	0.8705	0.5717	1.014	50- 60	2.646	595.8	99.5, 99.5
70	0.3501	0.6206	0.4806	0.5758	0.1408	0.0049	0.0000	0.0659	60- 70	0.7826	596.6	99.6, 99.6
80	0	0	0	0	0	0	0	0	70- 80	0.0901	596.7	99.6, 99.6
90	0	0	0	0	0	0	0	0	80- 90	0.0000	596.7	99.6, 99.6
100	0	0	0	0	0	0	0	0	90-100	0	596.7	99.6, 99.6
110	0	0	0	0	0	0	0	0	100-110	0	596.7	99.6, 99.6
120	0	0	0	0	0	0	0	0	110-120	0	596.7	99.6, 99.6
130	0	0	0	0	0	0.0000	0	0	120-130	0.0000	596.7	99.6, 99.6
140	0	0	0	0.0000	0.1135	0.2148	0.2354	0.1581	130-140	0.0210	596.7	99.6, 99.6
150	0.5793	0.3138	0.2697	0.3728	0.8419	1.369	1.532	1.142	140-150	0.2126	596.9	99.7, 99.7
160	2.565	1.937	1.776	2.102	2.763	3.245	3.317	3.046	150-160	0.7358	597.6	99.8, 99.8
170	3.832	3.657	3.592	3.629	3.769	3.691	3.549	3.539	160-170	0.9075	598.5	99.9, 99.9
180	3.837	3.754	3.610	3.388	3.813	3.726	3.577	3.367	170-180	0.3452	598.9	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

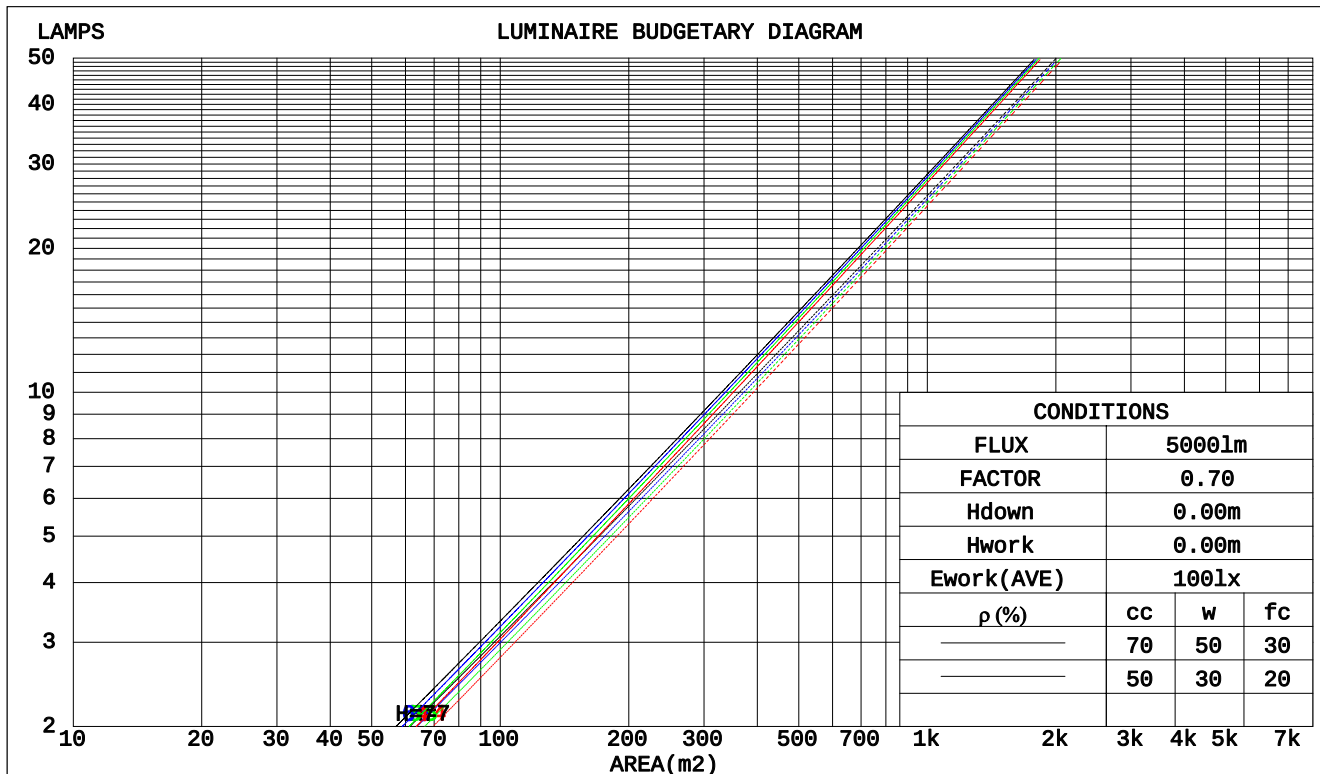
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

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	.00
1.0	1.13	1.11	1.10	1.11	1.09	1.08	1.07	1.06	1.05	1.03	1.02	1.01	.00	.99	.99	.97
2.0	1.08	1.05	1.03	1.07	1.04	1.02	1.03	1.01	.00	1.01	.99	.98	.98	.97	.96	.94
3.0	1.04	1.01	.98	1.03	.00	.97	1.00	.98	.96	.98	.96	.94	.96	.94	.93	.91
4.0	1.00	.97	.94	.99	.96	.93	.97	.95	.92	.96	.93	.91	.94	.92	.90	.89
5.0	.97	.93	.91	.96	.93	.90	.95	.92	.89	.93	.91	.89	.92	.90	.88	.87
6.0	.94	.90	.88	.94	.90	.87	.92	.89	.87	.91	.88	.86	.90	.88	.86	.85
7.0	.92	.88	.85	.91	.88	.85	.90	.87	.85	.89	.86	.84	.88	.86	.84	.83
8.0	.89	.86	.83	.89	.85	.83	.88	.85	.83	.87	.84	.82	.86	.84	.82	.81
9.0	.87	.84	.81	.87	.83	.81	.86	.83	.81	.85	.82	.80	.85	.82	.80	.79
10.0	.85	.82	.79	.85	.81	.79	.84	.81	.79	.84	.81	.79	.83	.80	.79	.78



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0	
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.130	.074	.023	.123	.070	.022	.110	.063	.020	.099	.057	.018	.088	.051	.016		
2.0	.120	.066	.020	.114	.063	.019	.104	.058	.018	.094	.053	.017	.086	.048	.015		
3.0	.111	.059	.018	.107	.057	.017	.098	.053	.016	.090	.049	.015	.083	.046	.014		
4.0	.104	.054	.016	.100	.052	.015	.093	.049	.015	.086	.046	.014	.080	.043	.013		
5.0	.097	.049	.014	.094	.048	.014	.088	.046	.013	.082	.043	.013	.077	.041	.012		
6.0	.091	.046	.013	.089	.045	.013	.083	.043	.012	.078	.041	.012	.074	.039	.012		
7.0	.086	.043	.012	.084	.042	.012	.079	.040	.012	.075	.039	.011	.071	.037	.011		
8.0	.082	.040	.011	.080	.039	.011	.076	.038	.011	.072	.037	.011	.069	.035	.010		
9.0	.078	.038	.011	.076	.037	.010	.073	.036	.010	.069	.035	.010	.066	.034	.010		
10.0	.075	.036	.010	.073	.035	.010	.070	.034	.010	.067	.033	.009	.064	.032	.009		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.171	.161	.151	.146	.138	.130	.100	.095	.090	.058	.055	.052	.018	.018	.017	
2.0	.152	.136	.122	.130	.117	.105	.089	.081	.073	.052	.047	.043	.017	.015	.014	
3.0	.137	.116	.100	.117	.100	.086	.080	.070	.061	.046	.041	.036	.015	.013	.012	
4.0	.124	.101	.083	.106	.087	.072	.073	.061	.051	.042	.035	.030	.014	.012	.010	
5.0	.113	.088	.070	.097	.076	.061	.067	.053	.043	.039	.031	.025	.012	.010	.008	
6.0	.104	.078	.060	.089	.068	.052	.062	.047	.037	.036	.028	.022	.012	.009	.007	
7.0	.096	.070	.051	.083	.060	.045	.057	.042	.032	.033	.025	.019	.011	.008	.006	
8.0	.089	.063	.045	.077	.055	.039	.053	.038	.028	.031	.023	.017	.010	.007	.005	
9.0	.083	.057	.039	.072	.050	.034	.050	.035	.024	.029	.021	.015	.009	.007	.005	
10.0	.078	.052	.035	.067	.045	.031	.047	.032	.022	.027	.019	.013	.009	.006	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: Spot92-R-3000K-RA90-15W-20D.						TYPE:					WEIGHT:				
DIM.:						SPEC.:					SERIAL No.:				
MFR.: 0						SUR.:					PROTECTION ANGLE:				
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	-1.9	-1.3	-1.7	-1.1	-1.0	0.4	0.9	0.6	1.1	1.3					
3H	-2.0	-1.4	-1.7	-1.2	-1.0	0.2	0.8	0.5	1.0	1.2					
4H	-2.1	-1.5	-1.8	-1.3	-1.1	0.2	0.7	0.4	0.9	1.1					
6H	-2.1	-1.6	-1.9	-1.4	-1.2	0.1	0.6	0.4	0.8	1.1					
8H	-2.2	-1.7	-1.9	-1.5	-1.2	0.0	0.5	0.3	0.8	1.0					
12H	-2.2	-1.8	-1.9	-1.5	-1.2	-0.0	0.5	0.3	0.7	1.0					
4H 2H	-2.0	-1.5	-1.8	-1.3	-1.1	0.2	0.7	0.4	0.9	1.1					
3H	-2.2	-1.7	-1.8	-1.4	-1.1	0.0	0.5	0.3	0.8	1.0					
4H	-2.2	-1.8	-1.9	-1.5	-1.2	-0.1	0.4	0.3	0.7	1.0					
6H	-2.4	-2.0	-2.0	-1.6	-1.3	-0.2	0.2	0.2	0.6	0.9					
8H	-2.4	-2.0	-2.0	-1.7	-1.3	-0.2	0.1	0.2	0.5	0.9					
12H	-2.5	-2.1	-2.1	-1.8	-1.4	-0.3	0.1	0.1	0.4	0.8					
8H 4H	-2.4	-2.0	-2.0	-1.7	-1.3	-0.2	0.1	0.2	0.5	0.9					
6H	-2.5	-2.2	-2.1	-1.8	-1.4	-0.3	-0.0	0.1	0.4	0.8					
8H	-2.6	-2.3	-2.1	-1.9	-1.4	-0.4	-0.1	0.1	0.3	0.7					
12H	-2.6	-2.4	-2.2	-2.0	-1.5	-0.5	-0.2	0.0	0.2	0.7					
12H 4H	-2.5	-2.1	-2.0	-1.8	-1.4	-0.3	0.1	0.1	0.4	0.8					
6H	-2.6	-2.3	-2.1	-1.9	-1.4	-0.4	-0.1	0.1	0.3	0.7					
8H	-2.6	-2.4	-2.2	-2.0	-1.5	-0.5	-0.2	0.0	0.2	0.7					
Variations with the observer position at spacings:															
S = 1.0H	+ 2.5 / - 8.2					+ 2.7 / - 9.0									
1.5H	+ 4.1 / - 5.8					+ 4.3 / - 6.1									
2.0H	+ 5.1 / - 5.1					+ 5.6 / - 6.8									

CIE Pub.117 Corrected 598.9 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.8)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

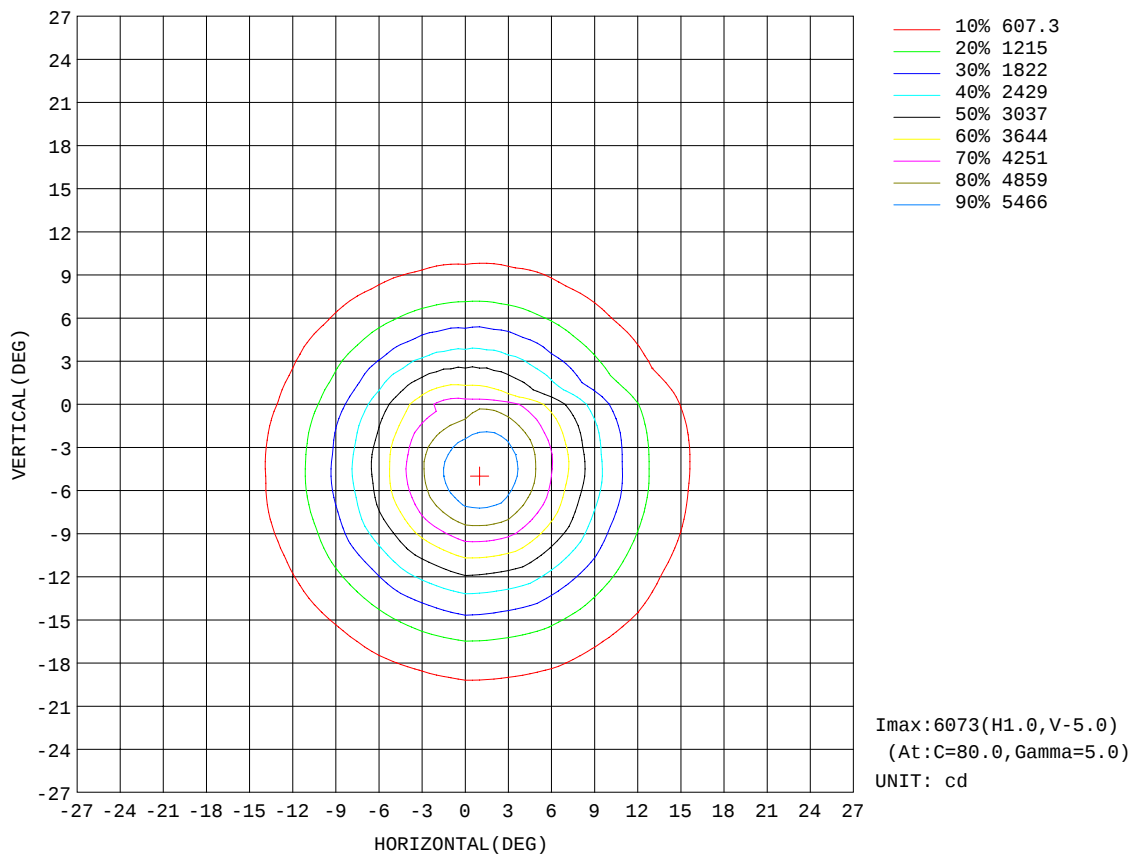
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	98
5.00	115	113	112	113	112	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

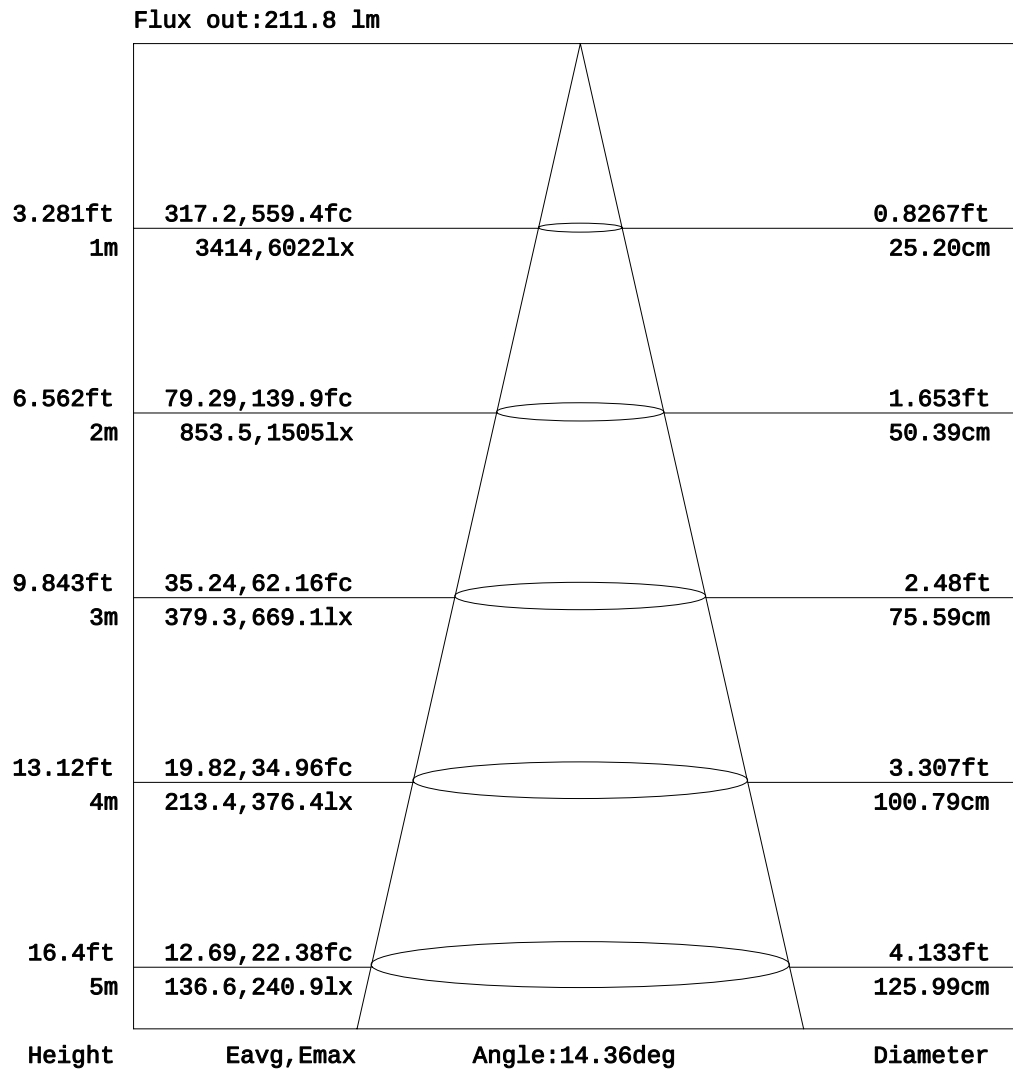


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

AAI Figure

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:



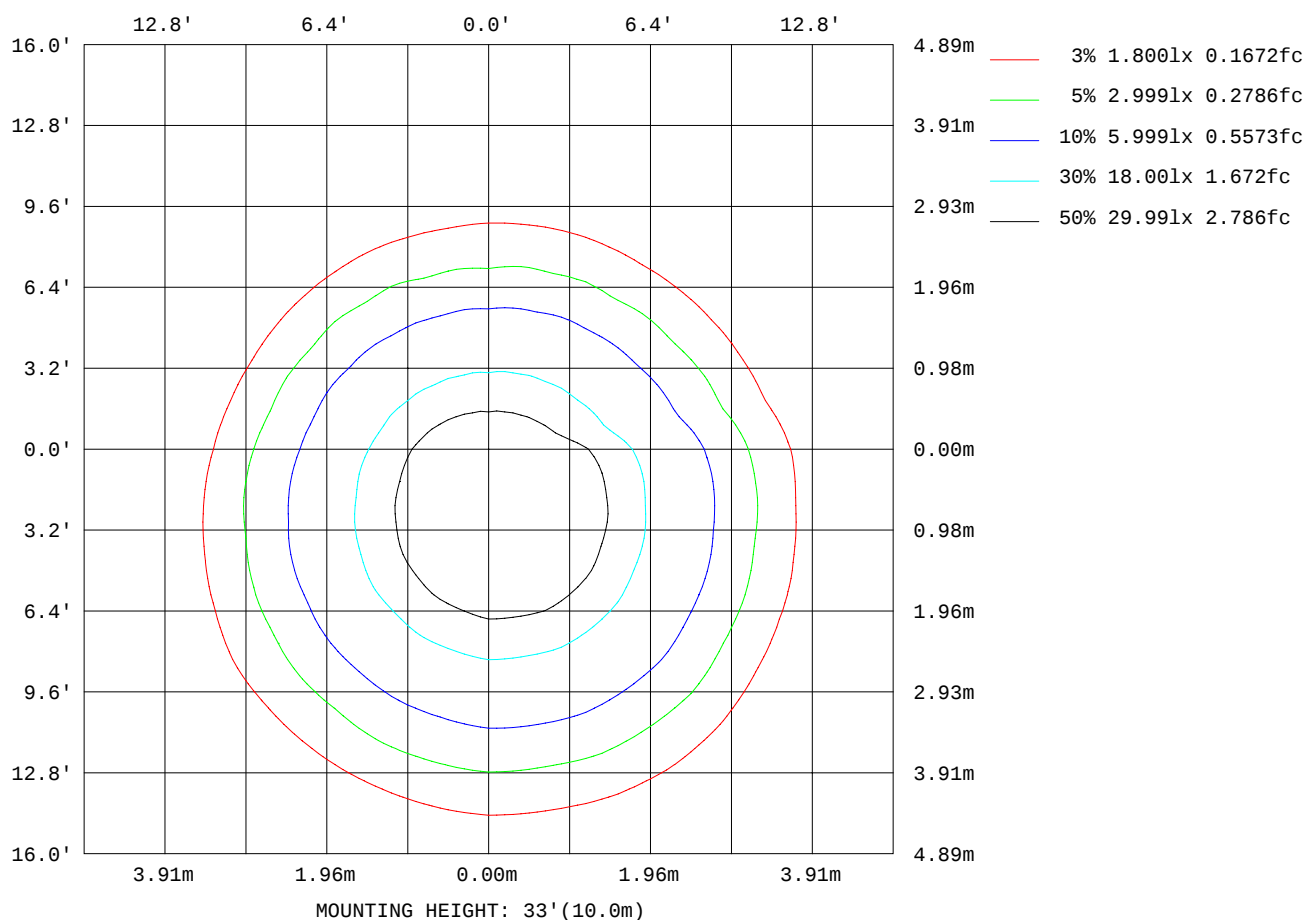
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	598.893	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G	C plane(deg)																		
deg	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	52	58	61	63	66	77	86	85	71	60	61	58	66	72	68	60	51	47	43
60	33	38	40	41	44	51	58	57	48	39	35	38	44	48	45	39	33	30	26
65	20	23	25	25	28	33	38	37	32	24	22	23	28	30	29	23	19	16	14
70	10	12	14	14	17	20	24	23	20	14	13	13	17	17	16	12	10	6	4
75	1	0	4	3	6	7	12	11	10	5	5	3	6	4	4	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	86	200	---	500
Category 2	65 to 90	38	200	---	500
Category 3	75 to 90	12	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	598.893	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	52	58	61	63	66	77	86	85	71	60	61	58	66	72	68	60	51	47	43
60	33	38	40	41	44	51	58	57	48	39	35	38	44	48	45	39	33	30	26
65	20	23	25	25	28	33	38	37	32	24	22	23	28	30	29	23	19	16	14
70	10	12	14	14	17	20	24	23	20	14	13	13	17	17	16	12	10	6	4
75	1	0	4	3	6	7	12	11	10	5	5	3	6	4	4	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	86	1000	1500	200	500
65 to 90	38	1000	1500	200	500

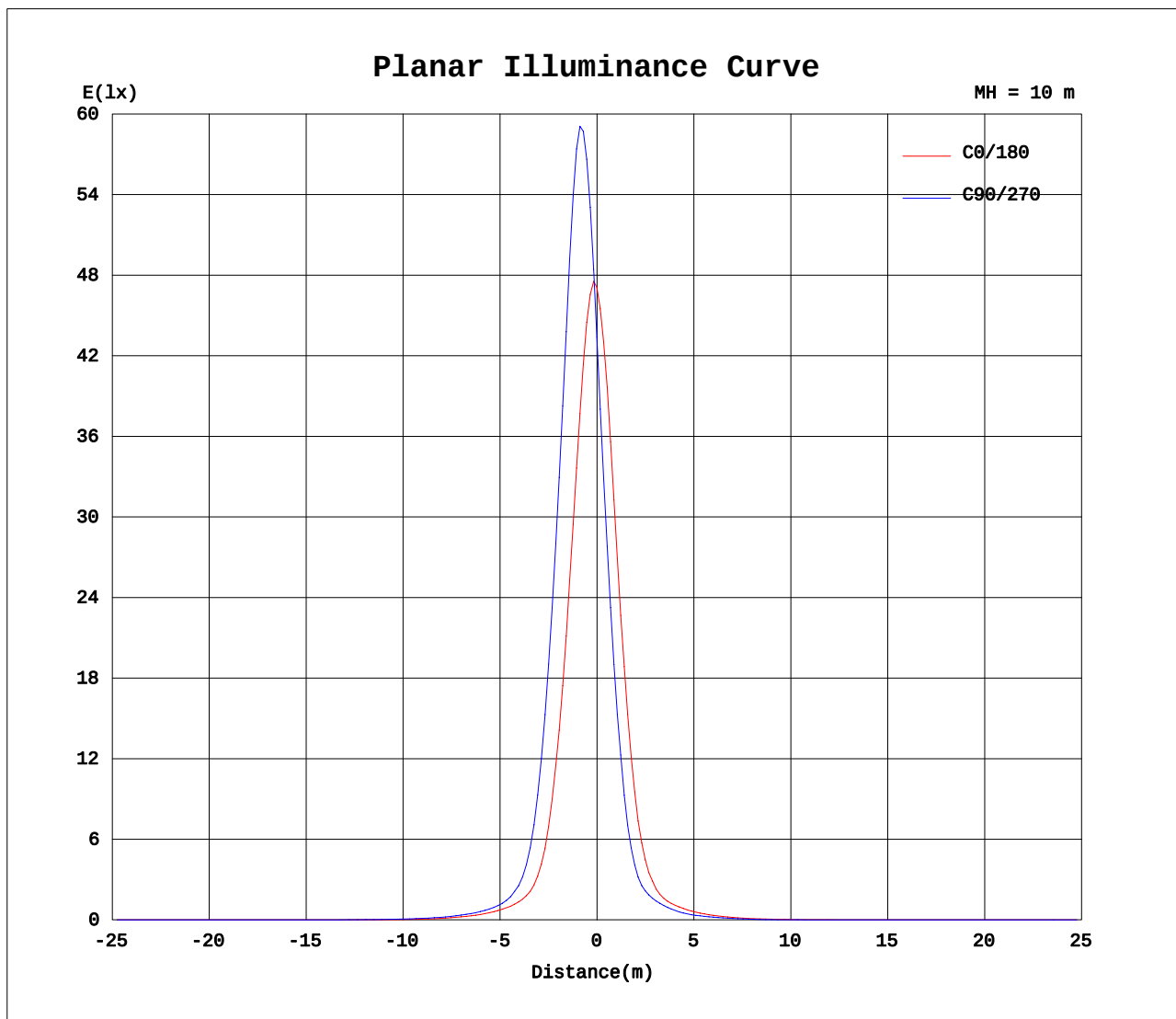
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

The luminaire satisfies the specified luminance criteria for
Negative Software with Type I & II Screen(Good to Moderate treatment).

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(°) γ (°)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	4711	4655	4639	4562	4559	4477	4481	4399	4414	4338	4361	4298	4323	4280	4312	4292	4314	4323	4711
5	3813	4207	4554	4958	5294	5630	5881	6065	6091	5977	5722	5408	5038	4697	4303	3990	3642	3384	3162
10	1826	2170	2455	2864	3191	3613	3871	4091	4056	4008	3728	3487	3119	2811	2401	2095	1754	1527	1274
15	594	742	879	1068	1255	1457	1590	1712	1686	1697	1541	1410	1227	1050	853	714	574	479	391
20	218	242	280	330	378	451	480	509	499	495	451	418	363	330	290	251	218	190	169
25	123	133	144	158	176	193	204	205	201	197	190	178	172	166	160	143	125	111	101
30	73.3	83.0	87.1	93.8	101	115	121	122	117	110	105	105	103	99.2	89.3	78.7	68.0	62.5	60.7
35	42.7	50.5	52.5	52.1	54.7	61.6	68.3	74.4	73.6	66.0	60.5	65.0	64.6	58.8	51.1	43.4	38.0	37.1	34.3
40	21.4	25.6	28.5	31.0	30.4	34.9	41.2	44.2	42.5	36.7	33.1	36.6	35.8	34.5	30.7	25.1	22.2	20.8	17.8
45	10.4	13.0	15.1	15.7	16.0	19.2	22.7	23.1	20.8	19.4	19.6	18.0	18.1	18.5	15.9	11.7	9.74	9.29	7.31
50	4.96	5.59	5.86	6.51	7.33	9.04	9.91	10.6	9.62	9.46	8.79	8.15	7.56	6.95	6.38	5.60	4.76	4.47	4.17
55	2.99	3.34	3.52	3.62	3.80	4.44	4.96	4.89	4.08	3.47	3.50	3.35	3.77	4.11	3.91	3.45	2.92	2.70	2.48
60	1.66	1.88	1.99	2.05	2.21	2.57	2.88	2.84	2.40	1.95	1.77	1.90	2.22	2.39	2.25	1.95	1.64	1.48	1.32
65	0.84	0.95	1.05	1.06	1.18	1.39	1.59	1.56	1.33	1.02	0.91	0.98	1.20	1.28	1.21	0.98	0.81	0.67	0.58
70	0.35	0.41	0.48	0.47	0.57	0.67	0.82	0.79	0.69	0.48	0.44	0.44	0.58	0.59	0.56	0.40	0.33	0.21	0.14
75	0.02	0.01	0.10	0.08	0.15	0.18	0.30	0.28	0.25	0.13	0.13	0.09	0.15	0.11	0.11	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
140	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.05	0.11
145	0.16	0.17	0.08	0.11	0.05	0.08	0.02	0.07	0.01	0.06	0.02	0.07	0.03	0.09	0.08	0.15	0.13	0.22	0.33
150	0.58	0.53	0.41	0.39	0.31	0.32	0.25	0.27	0.24	0.27	0.24	0.30	0.29	0.36	0.38	0.49	0.53	0.66	0.84
155	1.45	1.30	1.14	1.05	0.94	0.89	0.81	0.81	0.77	0.80	0.80	0.86	0.90	1.00	1.09	1.23	1.35	1.53	1.74
160	2.56	2.41	2.24	2.11	1.97	1.90	1.81	1.77	1.75	1.78	1.79	1.87	1.93	2.05	2.16	2.31	2.44	2.62	2.76
165	3.43	3.36	3.22	3.14	3.02	2.98	2.89	2.88	2.83	2.87	2.87	2.93	2.97	3.06	3.13	3.25	3.31	3.43	3.51
170	3.83	3.85	3.74	3.74	3.65	3.66	3.58	3.60	3.55	3.59	3.55	3.61	3.58	3.64	3.62	3.66	3.66	3.64	3.77
175	3.87	3.86	3.86	3.84	3.81	3.78	3.80	3.75	3.75	3.74	3.72	3.69	3.64	3.61	3.58	3.54	3.55	3.52	3.80
180	3.84	3.82	3.81	3.79	3.77	3.74	3.72	3.69	3.65	3.61	3.57	3.52	3.47	3.41	3.36	3.32	3.32	3.34	3.81

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 0
Test Date: 2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Spot92-R-3000K-RA90-15W-20D.	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: 0	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(°) γ (°)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	4655	4639	4562	4559	4477	4481	4399	4414	4338	4361	4298	4323	4280	4312	4292	4314	4323		
5	2852	2666	2422	2299	2125	2071	1965	1967	1924	1999	2022	2150	2226	2420	2551	2800	3016		
10	1078	963	821	745	656	618	574	573	561	592	618	688	735	846	950	1121	1311		
15	328	300	261	242	226	217	208	204	207	210	218	227	239	261	294	350	407		
20	153	142	134	133	127	123	118	116	113	116	118	124	130	140	151	164	179		
25	94.1	86.8	79.0	78.2	78.6	77.1	70.3	64.6	60.4	60.9	62.3	66.6	74.3	85.3	93.6	99.9	104		
30	58.1	51.3	44.0	42.7	43.4	43.2	40.9	39.3	37.0	34.5	35.7	40.9	45.5	51.7	56.1	57.7	59.2		
35	30.0	27.3	24.7	23.2	22.3	22.9	22.7	22.2	20.6	18.4	19.9	24.0	25.4	27.5	29.1	30.8	32.8		
40	16.0	13.4	12.3	11.7	11.2	11.2	10.2	9.33	8.98	9.11	9.88	10.9	12.1	14.3	14.3	15.8	17.2		
45	6.29	5.83	5.49	5.43	5.46	5.38	5.02	4.43	3.90	4.23	4.08	4.39	5.21	6.00	6.36	7.25	7.84		
50	3.89	3.63	3.40	3.37	3.39	3.35	3.19	2.74	2.34	2.13	2.28	2.72	3.32	3.75	3.96	4.03	4.15		
55	2.33	2.09	1.89	1.85	1.87	1.84	1.79	1.50	1.24	1.05	1.21	1.52	1.93	2.17	2.31	2.35	2.47		
60	1.25	1.05	0.91	0.85	0.89	0.85	0.82	0.66	0.57	0.48	0.57	0.72	0.95	1.07	1.17	1.19	1.29		
65	0.55	0.44	0.39	0.32	0.35	0.31	0.32	0.22	0.21	0.14	0.23	0.28	0.43	0.46	0.54	0.52	0.62		
70	0.13	0.03	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.14	0.12	0.21		
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
130	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
135	0.00	0.04	0.01	0.07	0.04	0.09	0.05	0.10	0.05	0.09	0.03	0.07	0.01	0.05	0.00	0.02	0.00		
140	0.09	0.16	0.15	0.22	0.21	0.26	0.24	0.28	0.24	0.26	0.20	0.22	0.15	0.17	0.10	0.11	0.05		
145	0.35	0.45	0.49	0.59	0.61	0.69	0.69	0.73	0.69	0.69	0.61	0.58	0.49	0.45	0.36	0.34	0.24		
150	0.94	1.09	1.19	1.33	1.41	1.50	1.52	1.56	1.53	1.50	1.41	1.33	1.19	1.09	0.94	0.86	0.71		
155	1.89	2.06	2.19	2.34	2.42	2.52	2.54	2.58	2.54	2.52	2.42	2.34	2.19	2.07	1.90	1.75	1.57		
160	2.87	3.03	3.11	3.23	3.26	3.34	3.33	3.37	3.32	3.32	3.25	3.21	3.09	3.01	2.86	2.74	2.57		
165	3.53	3.65	3.64	3.67	3.68	3.70	3.67	3.67	3.65	3.63	3.61	3.61	3.57	3.52	3.48	3.45	3.34		
170	3.78	3.78	3.74	3.71	3.67	3.62	3.62	3.53	3.55	3.48	3.52	3.48	3.55	3.53	3.53	3.57	3.56		
175	3.78	3.76	3.69	3.68	3.59	3.55	3.47	3.44	3.36	3.32	3.28	3.25	3.26	3.23	3.32	3.34	3.43		
180	3.79	3.80	3.75	3.76	3.70	3.70	3.64	3.64	3.58	3.57	3.48	3.46	3.37	3.36	3.28	3.29	3.34		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:0
Test Date:2022-04-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks: