

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: G3-1802-639-53

Luminaire Tested: S122DRP-H675D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: G3-1802-639-53
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H675D835-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

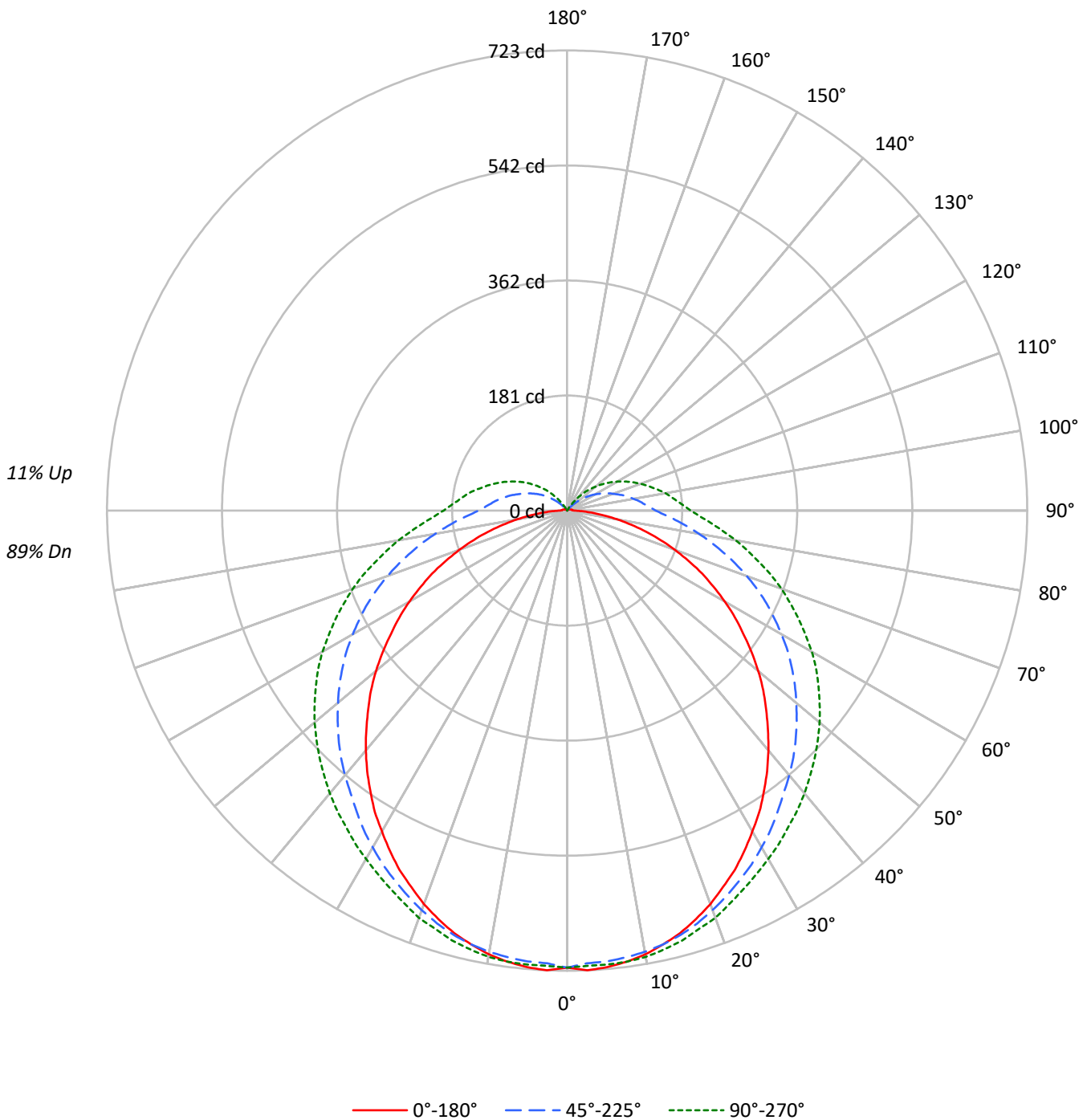
Lumens per Lamp: N/A
Luminaire Lumens: 2755.2 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 25.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13676	13676	13676
5°	13741	13114	13038
10°	13642	12679	12511
15°	13470	12232	11954
20°	13234	11748	11427
25°	12963	11269	10886
30°	12644	10820	10452
35°	12347	10372	10064
40°	12017	9988	9748
45°	11656	9642	9428
50°	11326	9287	9132
55°	10890	8953	8814
60°	10504	8585	8501
65°	10082	8212	8121
70°	9465	7764	7758
75°	8788	7289	7330
80°	7821	6820	6958
85°	6842	6452	6587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11656 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	2.5
10°-20°	195.5	7.1
20°-30°	296.1	10.7
30°-40°	361.1	13.1
40°-50°	388.6	14.1
50°-60°	377.8	13.7
60°-70°	330.3	12.0
70°-80°	254.3	9.2
80°-90°	170.9	6.2
90°-100°	118.3	4.3
100°-110°	87.0	3.2
110°-120°	57.9	2.1
120°-130°	32.8	1.2
130°-140°	14.1	0.5
140°-150°	2.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	559.6	20.3
0°-40°	920.7	33.4
0°-60°	1687.1	61.2
0°-90°	2442.6	88.7
90°-120°	263.1	9.5
90°-150°	312.6	11.3
90°-180°	313.0	11.4
0°-180°	2755.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	720	717	711	717	716	68
15°	687	690	690	699	699	194
25°	623	633	641	655	656	287
35°	539	557	577	599	606	337
45°	442	469	508	539	550	341
55°	338	378	431	470	482	303
65°	234	284	346	388	401	231
75°	129	188	254	299	312	136
85°	39	103	171	214	227	40
90°	11	72	139	181	194	7
95°	8	58	121	161	173	7
105°	6	36	92	128	139	6
115°	4	17	64	96	107	4
125°	3	2	38	65	75	2
135°	1	1	13	35	44	1
145°	1	0	0	8	12	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718	718	718	718	718
2.5°	723	720	712	718	716
5°	720	717	711	717	716
7.5°	715	713	708	716	715
10°	708	707	704	712	712
12.5°	698	699	698	707	706
15°	687	690	690	699	699
17.5°	673	678	680	690	689
20°	658	664	668	679	681
22.5°	640	649	655	667	668
25°	623	633	641	655	656
27.5°	603	615	627	641	644
30°	582	597	611	628	632
32.5°	562	577	595	613	620
35°	539	557	577	599	606
37.5°	516	535	559	585	594
40°	492	514	543	571	580
42.5°	467	491	526	555	565
45°	442	469	508	539	550
47.5°	418	447	489	524	534
50°	392	424	470	506	518
52.5°	365	401	451	488	500
55°	338	378	431	470	482
57.5°	313	355	411	450	464
60°	286	331	389	430	444
62.5°	259	308	367	409	422
65°	234	284	346	388	401
67.5°	206	259	323	367	379
70°	180	236	300	344	358
72.5°	154	211	277	321	336
75°	129	188	254	299	312
77.5°	103	165	232	277	290
80°	80	142	210	255	269
82.5°	57	121	190	234	247
85°	39	103	171	214	227
87.5°	23	86	153	196	209
90°	11	72	139	181	194
92.5°	9	65	129	170	183
95°	8	58	121	161	173
97.5°	8	53	114	153	165
100°	7	47	106	144	157
102.5°	7	41	99	136	148
105°	6	36	92	128	139
107.5°	5	31	84	120	131
110°	5	26	77	112	123



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4	22	71	104	115
115°	4	17	64	96	107
117.5°	4	12	57	88	99
120°	3	8	51	81	91
122.5°	3	5	44	73	83
125°	3	2	38	65	75
127.5°	2	2	31	58	67
130°	2	1	25	50	59
132.5°	2	1	19	43	51
135°	1	1	13	35	44
137.5°	1	1	7	28	35
140°	1	0	3	21	27
142.5°	1	0	0	14	20
145°	1	0	0	8	12
147.5°	0	0	0	2	6
150°	0	0	0	0	1
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference 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	17.31	18.78	17.83	19.31	19.90	20.37	21.85	20.90	22.38	22.96
	3H	18.81	20.16	19.35	20.70	21.32	23.00	24.35	23.54	24.89	25.51
	4H	19.31	20.59	19.87	21.15	21.78	24.28	25.56	24.84	26.12	26.75
	6H	19.63	20.82	20.20	21.39	22.04	25.61	26.80	26.18	27.37	28.02
	8H	19.70	20.85	20.29	21.44	22.10	26.29	27.44	26.88	28.03	28.68
	12H	19.74	20.84	20.33	21.43	22.11	27.04	28.15	27.64	28.73	29.42
4H	2H	18.42	19.71	18.99	20.26	20.90	20.76	22.05	21.32	22.60	23.23
	3H	20.18	21.28	20.76	21.88	22.53	23.61	24.71	24.18	25.30	25.96
	4H	20.83	21.84	21.43	22.45	23.13	25.05	26.06	25.64	26.66	27.34
	6H	21.28	22.18	21.90	22.81	23.50	26.55	27.45	27.16	28.08	28.77
	8H	21.41	22.25	22.03	22.88	23.59	27.33	28.18	27.95	28.80	29.51
	12H	21.49	22.25	22.13	22.91	23.62	28.20	28.97	28.84	29.62	30.34
8H	4H	21.67	22.51	22.29	23.14	23.85	25.24	26.08	25.86	26.71	27.42
	6H	22.33	23.05	22.98	23.72	24.43	26.90	27.62	27.55	28.29	29.00
	8H	22.57	23.21	23.23	23.89	24.62	27.81	28.46	28.47	29.13	29.86
	12H	22.74	23.31	23.40	23.98	24.77	28.84	29.42	29.51	30.09	30.88
12H	4H	21.90	22.67	22.54	23.32	24.04	25.25	26.01	25.89	26.67	27.38
	6H	22.68	23.33	23.34	24.00	24.73	26.94	27.58	27.60	28.26	28.99
	8H	23.02	23.60	23.68	24.26	25.05	27.91	28.48	28.57	29.15	29.94