

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: G3-1802-639-14

Luminaire Tested: S122DRP-S675D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: G3-1802-639-14  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S675D835-X4F0-XX-UDD-D-W  
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

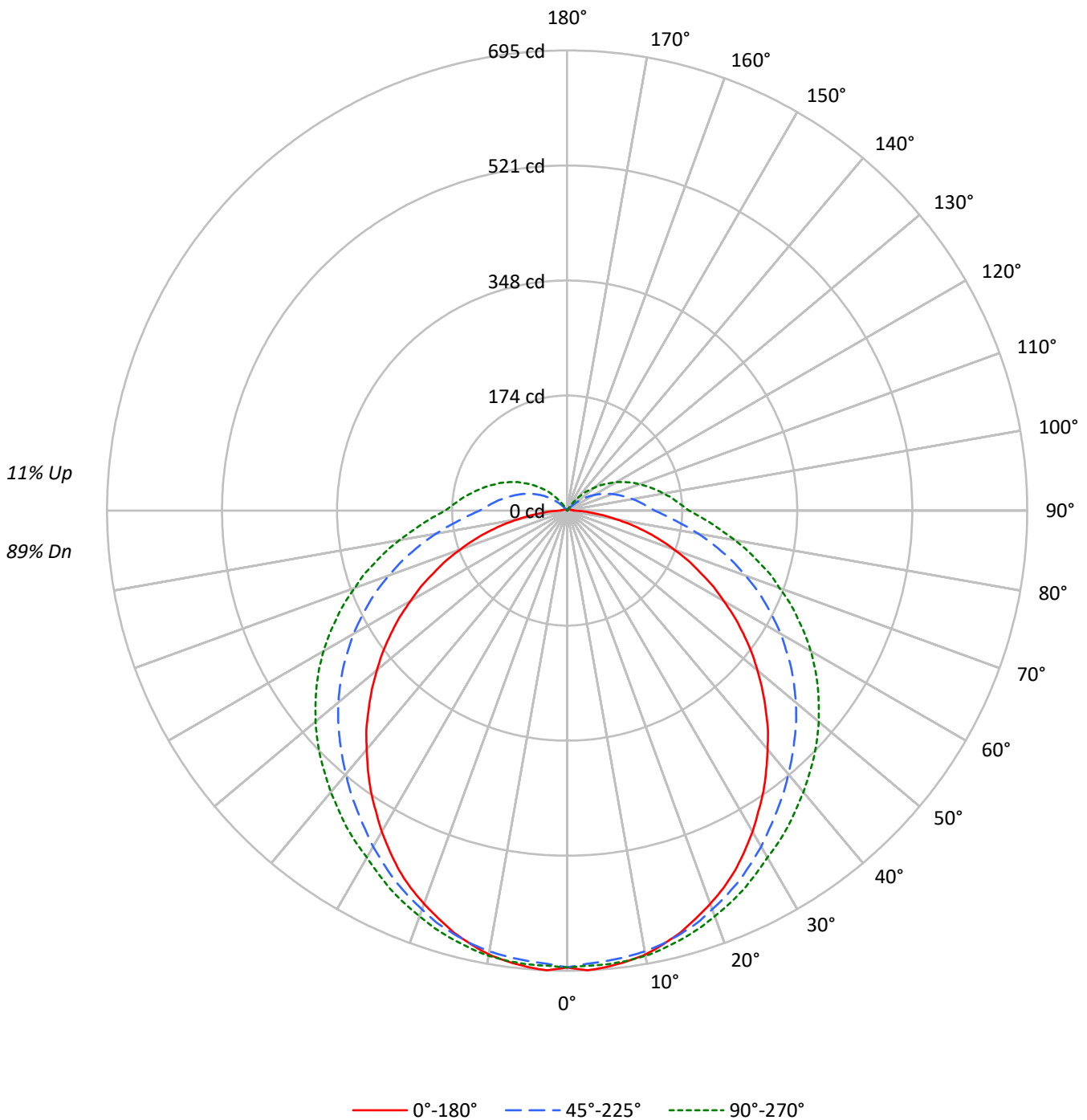
Lumens per Lamp: N/A  
Luminaire Lumens: 2632.8 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')  
CIE Type: Semi-Direct

Input Watts (W): 26.4  
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										
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	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	85	81	82	79	77	77	75	72	69																				
2	94	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	42	39																				
5	71	57	48	41	68	56	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	42	36	31	29																				
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25																				
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23																				
9	52	39	30	25	50	38	30	24	36	29	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°	13143	13143	13143
5°	13207	12597	12529
10°	13122	12175	12001
15°	12940	11736	11458
20°	12711	11273	10941
25°	12485	10829	10471
30°	12166	10377	10006
35°	11843	9941	9666
40°	11504	9565	9328
45°	11181	9224	9034
50°	10835	8912	8744
55°	10471	8579	8448
60°	10027	8232	8137
65°	9565	7832	7777
70°	9045	7402	7390
75°	8380	6973	7025
80°	7333	6528	6648
85°	6315	6113	6326

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11181 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.4	2.5
10°-20°	187.6	7.1
20°-30°	284.3	10.8
30°-40°	346.1	13.1
40°-50°	372.4	14.1
50°-60°	361.7	13.7
60°-70°	315.9	12.0
70°-80°	243.1	9.2
80°-90°	162.8	6.2
90°-100°	112.3	4.3
100°-110°	82.0	3.1
110°-120°	54.2	2.1
120°-130°	30.2	1.1
130°-140°	12.7	0.5
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	537.3	20.4
0°-40°	883.4	33.6
0°-60°	1617.5	61.4
0°-90°	2339.3	88.9
90°-120°	248.5	9.4
90°-150°	293.5	11.1
90°-180°	294.0	11.2
0°-180°	2632.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	692	689	683	689	688	66
15°	660	662	662	671	670	186
25°	600	607	616	628	631	276
35°	517	534	553	575	582	323
45°	424	451	486	517	527	327
55°	325	361	413	449	462	291
65°	222	271	330	371	384	221
75°	123	179	243	286	299	130
85°	36	98	162	204	218	38
90°	10	68	132	172	184	7
95°	8	55	115	153	165	6
105°	5	34	86	121	132	6
115°	4	15	60	90	101	4
125°	2	2	34	61	70	2
135°	1	1	11	32	40	1
145°	0	0	0	6	11	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°	690	690	690	690	690
2.5°	695	692	685	690	688
5°	692	689	683	689	688
7.5°	687	685	680	687	686
10°	681	679	676	684	683
12.5°	671	672	670	678	677
15°	660	662	662	671	670
17.5°	646	650	653	662	662
20°	632	637	641	652	652
22.5°	617	623	629	640	642
25°	600	607	616	628	631
27.5°	580	591	601	616	618
30°	560	573	586	602	605
32.5°	538	553	569	588	594
35°	517	534	553	575	582
37.5°	494	513	537	561	568
40°	471	493	520	546	555
42.5°	449	471	503	532	541
45°	424	451	486	517	527
47.5°	400	429	469	501	512
50°	375	406	451	485	496
52.5°	351	384	432	467	479
55°	325	361	413	449	462
57.5°	300	340	392	431	444
60°	273	316	373	411	425
62.5°	249	294	351	392	405
65°	222	271	330	371	384
67.5°	198	249	309	350	364
70°	172	224	286	329	341
72.5°	148	202	265	307	322
75°	123	179	243	286	299
77.5°	99	157	222	265	279
80°	75	136	201	243	257
82.5°	55	115	181	223	236
85°	36	98	162	204	218
87.5°	22	82	146	187	200
90°	10	68	132	172	184
92.5°	9	62	123	162	174
95°	8	55	115	153	165
97.5°	7	50	108	145	157
100°	7	44	100	137	148
102.5°	6	39	93	129	140
105°	5	34	86	121	132
107.5°	5	29	79	113	124
110°	4	24	73	105	116



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4	20	66	98	109
115°	4	15	60	90	101
117.5°	3	11	53	83	93
120°	3	7	47	75	86
122.5°	3	4	41	68	77
125°	2	2	34	61	70
127.5°	2	1	28	53	62
130°	2	1	22	46	54
132.5°	2	1	16	39	47
135°	1	1	11	32	40
137.5°	1	1	6	25	32
140°	1	0	2	18	24
142.5°	1	0	0	12	17
145°	0	0	0	6	11
147.5°	0	0	0	1	4
150°	0	0	0	0	0
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	17.17	18.65	17.70	19.18	19.76	20.23	21.71	20.76	22.24	22.82
	3H	18.67	20.02	19.21	20.56	21.18	22.86	24.21	23.40	24.75	25.37
	4H	19.17	20.46	19.73	21.01	21.64	24.14	25.43	24.70	25.98	26.61
	6H	19.48	20.68	20.06	21.25	21.89	25.47	26.67	26.04	27.23	27.88
	8H	19.56	20.71	20.14	21.30	21.95	26.15	27.30	26.73	27.89	28.54
	12H	19.60	20.70	20.19	21.28	21.96	26.91	28.01	27.50	28.59	29.27
4H	2H	18.28	19.57	18.84	20.12	20.75	20.62	21.91	21.18	22.46	23.09
	3H	20.04	21.14	20.61	21.73	22.38	23.46	24.56	24.03	25.16	25.81
	4H	20.68	21.69	21.27	22.29	22.98	24.90	25.92	25.49	26.52	27.20
	6H	21.13	22.03	21.74	22.65	23.35	26.41	27.31	27.02	27.93	28.63
	8H	21.26	22.10	21.87	22.73	23.43	27.19	28.03	27.80	28.66	29.36
	12H	21.33	22.10	21.97	22.75	23.46	28.06	28.83	28.70	29.48	30.19
8H	4H	21.52	22.37	22.14	22.99	23.70	25.10	25.94	25.71	26.57	27.27
	6H	22.18	22.90	22.83	23.57	24.28	26.76	27.48	27.41	28.14	28.85
	8H	22.42	23.06	23.07	23.74	24.46	27.66	28.31	28.32	28.99	29.71
	12H	22.58	23.16	23.24	23.82	24.61	28.70	29.28	29.36	29.94	30.73
12H	4H	21.75	22.52	22.39	23.17	23.88	25.10	25.87	25.74	26.52	27.24
	6H	22.53	23.18	23.19	23.85	24.57	26.79	27.44	27.45	28.12	28.84
	8H	22.86	23.44	23.53	24.11	24.89	27.76	28.34	28.42	29.00	29.79