

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: P242837

Luminaire Tested: S125DRP-S850D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242837  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S850D927-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

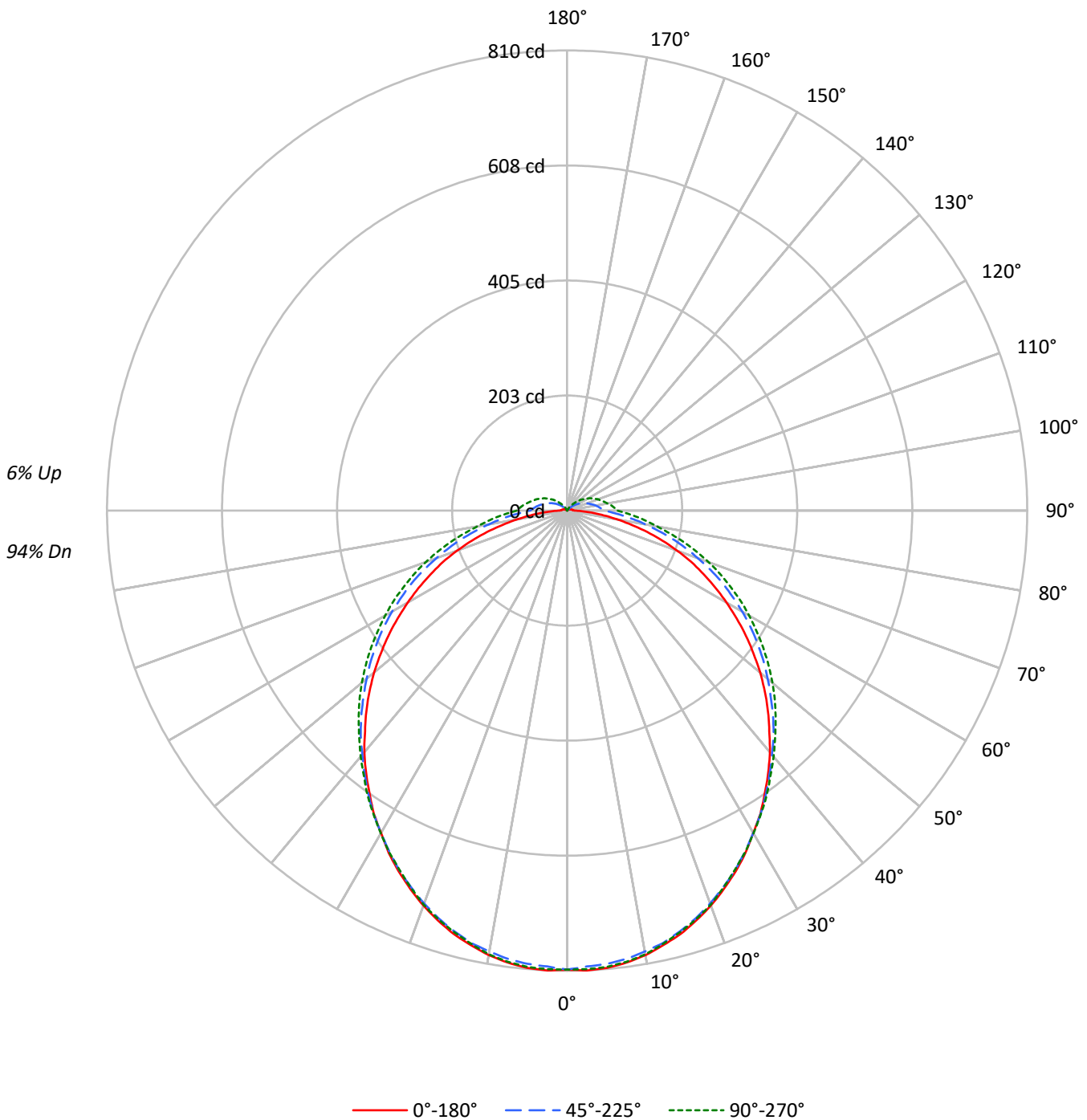
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2503.2 lumens  
Efficiency: N/A  
Efficacy: 94.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5743	5743	5743
5°	5754	5632	5648
10°	5713	5527	5516
15°	5645	5402	5348
20°	5553	5249	5182
25°	5444	5086	4978
30°	5310	4906	4793
35°	5187	4742	4623
40°	5061	4568	4451
45°	4919	4418	4299
50°	4782	4256	4162
55°	4619	4103	4003
60°	4440	3927	3840
65°	4254	3743	3657
70°	4042	3494	3467
75°	3706	3251	3234
80°	3265	2956	2979
85°	2854	2742	2876

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.5	3.1
10°-20°	217.1	8.7
20°-30°	322.8	12.9
30°-40°	382.3	15.3
40°-50°	395.2	15.8
50°-60°	364.1	14.5
60°-70°	294.3	11.8
70°-80°	196.9	7.9
80°-90°	101.8	4.1
90°-100°	57.3	2.3
100°-110°	42.3	1.7
110°-120°	28.3	1.1
120°-130°	16.0	0.6
130°-140°	7.0	0.3
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	616.3	24.6
0°-40°	998.6	39.9
0°-60°	1757.8	70.2
0°-90°	2350.8	93.9
90°-120°	127.9	5.1
90°-150°	152.3	6.1
90°-180°	152.0	6.1
0°-180°	2503.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	808	806	801	807	806	77
15°	772	772	767	772	768	217
25°	701	704	699	702	698	323
35°	607	612	610	612	612	380
45°	500	509	512	518	519	386
55°	384	397	410	418	421	343
65°	265	283	302	314	317	263
75°	146	166	192	208	212	155
85°	44	70	97	115	121	45
90°	13	38	65	83	89	9
95°	10	31	58	75	81	8
105°	7	20	44	59	65	8
115°	5	10	31	45	50	5
125°	3	2	18	31	35	3
135°	2	1	6	17	21	1
145°	1	0	0	4	7	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°	808.0	808.0	808.0	808.0	808.0
2.5°	810.4	808.8	803.3	808.8	808.0
5°	808.0	806.4	800.9	807.2	806.4
7.5°	802.5	801.7	796.1	801.7	800.9
10°	794.6	794.6	788.2	793.8	793.0
12.5°	783.5	784.3	779.5	783.5	781.1
15°	771.6	772.4	766.8	771.6	768.4
17.5°	756.5	758.1	752.6	756.5	754.2
20°	739.9	741.5	735.9	738.3	738.3
22.5°	720.9	724.1	717.7	720.9	718.5
25°	701.1	703.5	698.7	701.9	697.9
27.5°	679.7	682.9	677.3	679.7	678.1
30°	655.1	659.9	655.1	656.7	655.9
32.5°	633.0	636.9	633.7	635.3	634.5
35°	606.8	612.4	610.0	612.4	612.4
37.5°	581.5	586.2	585.4	588.6	587.8
40°	555.3	561.7	560.9	564.0	565.6
42.5°	526.8	535.5	537.9	541.9	541.9
45°	499.9	508.6	512.5	518.1	518.9
47.5°	472.1	480.1	486.4	494.3	495.9
50°	443.6	452.3	461.0	469.8	472.1
52.5°	413.5	424.6	435.7	445.2	446.8
55°	384.2	396.9	409.6	418.3	421.4
57.5°	354.1	369.2	383.4	392.9	395.3
60°	324.0	339.8	355.7	367.6	369.9
62.5°	294.7	310.5	328.0	341.4	344.6
65°	264.6	282.8	301.8	313.7	316.9
67.5°	236.9	254.3	273.3	287.6	291.5
70°	206.0	224.2	244.8	259.8	264.6
72.5°	175.9	194.9	217.9	234.5	237.7
75°	145.8	166.4	191.7	207.6	211.5
77.5°	116.5	140.2	164.0	181.4	184.6
80°	89.5	113.3	140.2	157.6	160.8
82.5°	65.0	90.3	118.0	134.7	141.0
85°	43.6	69.7	97.4	114.9	121.2
87.5°	27.7	53.1	80.0	98.2	103.8
90°	12.7	38.0	65.0	83.2	88.7
92.5°	11.1	34.1	61.8	79.2	84.8
95°	10.3	30.9	57.8	75.3	80.8
97.5°	9.5	28.5	54.7	71.3	76.8
100°	8.7	25.3	50.7	67.3	72.1
102.5°	7.9	23.0	47.5	63.4	68.1
105°	7.1	19.8	43.6	59.4	65.0
107.5°	6.3	17.4	40.4	56.2	61.0
110°	5.5	15.1	37.2	52.3	57.8

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.5	12.7	34.1	48.3	53.9
115°	4.8	10.3	30.9	45.2	49.9
117.5°	4.0	7.9	27.7	41.2	46.7
120°	4.0	6.3	24.6	38.0	42.8
122.5°	3.2	4.0	21.4	34.1	38.8
125°	3.2	2.4	18.2	30.9	34.9
127.5°	2.4	1.6	15.1	26.9	31.7
130°	2.4	1.6	12.7	23.8	27.7
132.5°	1.6	1.6	9.5	20.6	23.8
135°	1.6	0.8	6.3	16.6	20.6
137.5°	1.6	0.8	4.0	13.5	16.6
140°	0.8	0.8	1.6	10.3	13.5
142.5°	0.8	0.0	0.0	7.1	10.3
145°	0.8	0.0	0.0	4.0	7.1
147.5°	0.0	0.0	0.0	1.6	3.2
150°	0.0	0.0	0.0	0.0	0.8
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	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	15.99	17.52	16.45	17.96	18.43	17.03	18.56	17.49	19.00	19.47
	3H	17.64	19.04	18.11	19.49	19.99	19.21	20.60	19.68	21.05	21.56
	4H	18.21	19.53	18.70	20.00	20.52	20.17	21.49	20.66	21.96	22.48
	6H	18.59	19.82	19.10	20.30	20.83	21.07	22.30	21.58	22.78	23.31
	8H	18.70	19.87	19.21	20.37	20.91	21.51	22.68	22.02	23.18	23.72
	12H	18.76	19.88	19.28	20.38	20.95	21.96	23.09	22.49	23.59	24.16
4H	2H	16.75	18.07	17.25	18.54	19.06	17.57	18.88	18.06	19.35	19.87
	3H	18.63	19.75	19.14	20.26	20.80	19.96	21.08	20.46	21.59	22.13
	4H	19.34	20.35	19.86	20.88	21.45	21.07	22.09	21.60	22.61	23.19
	6H	19.84	20.74	20.39	21.29	21.88	22.14	23.03	22.68	23.58	24.17
	8H	19.99	20.84	20.55	21.39	21.99	22.66	23.50	23.21	24.05	24.65
	12H	20.10	20.86	20.67	21.44	22.04	23.21	23.98	23.79	24.55	25.16
8H	4H	19.82	20.66	20.37	21.21	21.81	21.33	22.17	21.88	22.72	23.33
	6H	20.48	21.19	21.07	21.78	22.39	22.55	23.26	23.14	23.85	24.46
	8H	20.72	21.36	21.32	21.96	22.58	23.19	23.83	23.79	24.43	25.06
	12H	20.90	21.47	21.50	22.06	22.75	23.91	24.47	24.50	25.06	25.75
12H	4H	19.92	20.68	20.49	21.26	21.86	21.35	22.11	21.92	22.69	23.30
	6H	20.64	21.28	21.24	21.89	22.51	22.60	23.24	23.20	23.85	24.47
	8H	20.96	21.53	21.56	22.12	22.81	23.31	23.88	23.91	24.47	25.16