

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242837

Luminaire Tested: **S125DR-S850D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
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 (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-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: ELECTRONIC 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

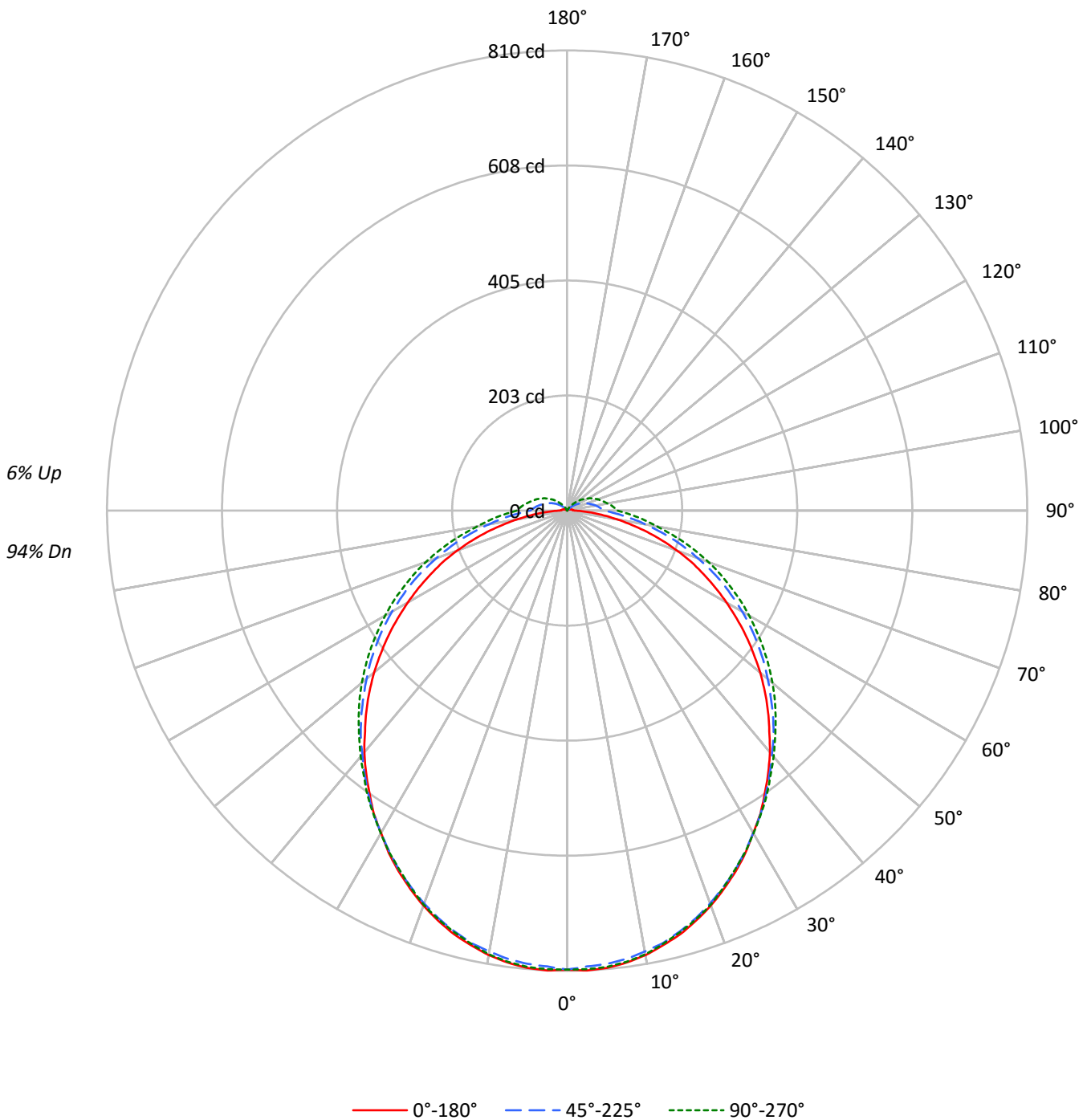
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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



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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

(END OF REPORT)