

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: P242535

Luminaire Tested: S123RDRP-S340D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242535  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D835-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

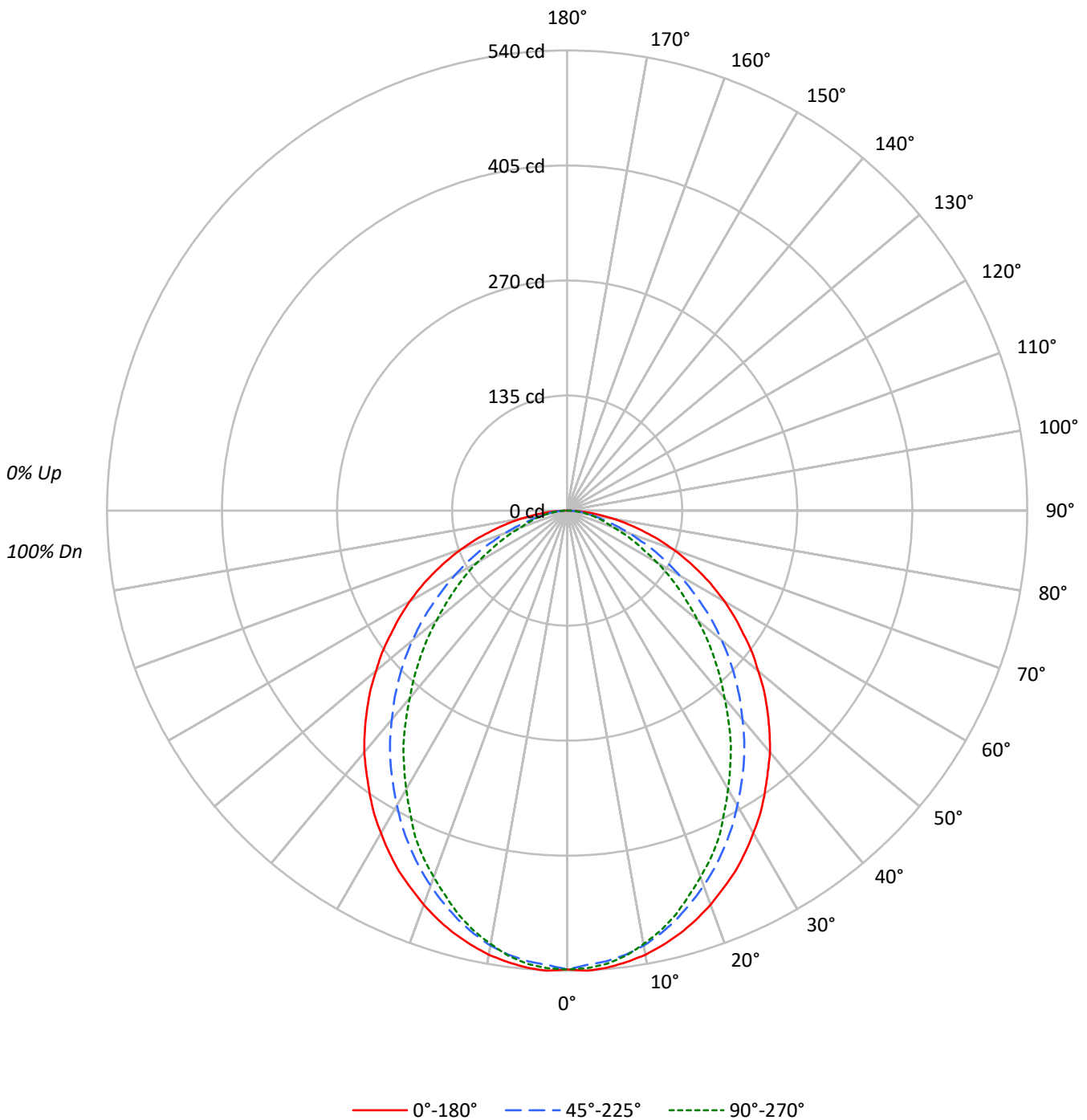
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1216.2 lumens  
Efficiency: N/A  
Efficacy: 104.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.6  
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

TEST NUMBER: P242535

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242535

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-F-W

**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	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86																												
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73																												
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62																												
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54																												
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47																												
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42																												
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37																												
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																												
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																												
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28																												

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

	0°	45°	90°
0°	6526	6526	6526
5°	6551	6460	6497
10°	6514	6379	6357
15°	6444	6229	6164
20°	6348	6043	5903
25°	6248	5834	5647
30°	6118	5592	5286
35°	5983	5349	4956
40°	5859	5063	4546
45°	5696	4783	4176
50°	5516	4464	3762
55°	5334	4098	3377
60°	5166	3704	2953
65°	4948	3281	2530
70°	4675	2754	2041
75°	4276	2168	1920
80°	3811	1920	1766
85°	3213	1697	1585

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5696 cd/sqm



TEST NUMBER: P242535

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.6	4.2
10°-20°	140.8	11.6
20°-30°	202.7	16.7
30°-40°	228.3	18.8
40°-50°	218.4	18.0
50°-60°	178.8	14.7
60°-70°	120.5	9.9
70°-80°	60.4	5.0
80°-90°	15.8	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	394.1	32.4
0°-40°	622.4	51.2
0°-60°	1019.5	83.8
0°-90°	1216.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1216.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	538	536	531	535	534	51
15°	514	509	496	494	491	145
25°	467	456	436	427	422	215
35°	404	389	362	343	335	253
45°	332	313	279	254	244	256
55°	252	231	194	168	160	226
65°	172	148	114	93	88	171
75°	91	70	46	42	41	97
85°	23	14	12	11	11	27
90°	0	0	0	0	0	

TEST NUMBER: P242535

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	538.4	538.4	538.4	538.4	538.4
2.5°	540.5	538.8	533.6	538.4	537.5
5°	538.4	536.2	530.9	534.9	534.0
7.5°	534.4	532.2	525.7	528.3	527.0
10°	529.2	526.1	518.3	518.7	516.5
12.5°	521.8	518.3	508.2	507.8	505.2
15°	513.5	508.7	496.4	494.3	491.2
17.5°	503.4	498.2	482.9	478.5	474.2
20°	492.1	485.1	468.5	462.8	457.6
22.5°	479.4	471.1	453.2	445.8	441.0
25°	467.2	456.3	436.2	427.0	422.2
27.5°	452.3	440.6	418.7	406.5	399.1
30°	437.1	424.0	399.5	384.7	377.7
32.5°	421.8	406.5	380.3	363.7	356.3
35°	404.3	388.6	361.5	342.7	334.9
37.5°	386.8	369.8	341.4	320.5	310.9
40°	370.3	351.0	320.0	297.3	287.3
42.5°	351.5	332.3	300.0	274.6	265.9
45°	332.3	312.6	279.0	254.1	243.6
47.5°	313.5	291.7	258.5	231.4	222.2
50°	292.5	272.0	236.7	209.6	199.5
52.5°	273.8	251.1	216.1	187.7	179.0
55°	252.4	231.0	193.9	168.5	159.8
57.5°	233.2	210.0	172.5	148.5	141.0
60°	213.1	189.1	152.8	129.2	121.8
62.5°	193.0	169.0	132.7	110.9	103.0
65°	172.5	148.5	114.4	93.0	88.2
67.5°	151.9	127.5	94.3	78.2	72.9
70°	131.9	108.3	77.7	62.4	57.6
72.5°	111.8	88.6	61.6	49.8	48.5
75°	91.3	70.3	46.3	41.9	41.0
77.5°	72.5	53.3	36.2	33.6	32.7
80°	54.6	36.7	27.5	26.2	25.3
82.5°	37.5	22.7	19.6	18.3	18.3
85°	23.1	13.5	12.2	11.4	11.4
87.5°	10.5	5.7	5.7	5.2	4.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242535  
 CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-F-W

**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	17.96	19.52	18.33	19.83	20.15	15.34	16.89	15.70	17.21	17.52
	3H	19.74	21.14	20.12	21.47	21.83	16.45	17.85	16.83	18.17	18.53
	4H	20.40	21.71	20.80	22.06	22.44	16.84	18.16	17.24	18.50	18.88
	6H	20.88	22.10	21.30	22.46	22.85	17.16	18.37	17.57	18.74	19.13
	8H	21.03	22.19	21.46	22.58	22.98	17.27	18.43	17.70	18.82	19.22
	12H	21.14	22.24	21.57	22.63	23.05	17.35	18.45	17.78	18.83	19.26
4H	2H	18.22	19.54	18.62	19.89	20.26	16.05	17.36	16.45	17.71	18.09
	3H	20.19	21.28	20.60	21.68	22.08	17.33	18.42	17.74	18.82	19.22
	4H	20.96	21.94	21.39	22.36	22.79	17.81	18.79	18.24	19.20	19.64
	6H	21.55	22.41	22.01	22.85	23.31	18.22	19.08	18.68	19.52	19.98
	8H	21.75	22.55	22.21	22.99	23.46	18.37	19.17	18.83	19.61	20.08
	12H	21.89	22.61	22.37	23.09	23.56	18.48	19.20	18.96	19.67	20.14
8H	4H	21.01	21.81	21.48	22.26	22.72	18.13	18.93	18.59	19.37	19.84
	6H	21.67	22.34	22.17	22.83	23.30	18.64	19.30	19.14	19.79	20.27
	8H	21.91	22.50	22.42	23.01	23.50	18.84	19.44	19.36	19.95	20.43
	12H	22.11	22.63	22.62	23.12	23.69	19.01	19.54	19.52	20.03	20.60
12H	4H	21.00	21.72	21.48	22.20	22.67	18.17	18.89	18.65	19.36	19.84
	6H	21.66	22.26	22.17	22.77	23.25	18.70	19.30	19.21	19.80	20.29
	8H	21.93	22.46	22.44	22.95	23.51	18.96	19.48	19.46	19.97	20.54