

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



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059583

Luminaire Tested: S123RDR-H340D835-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059583  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D835-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

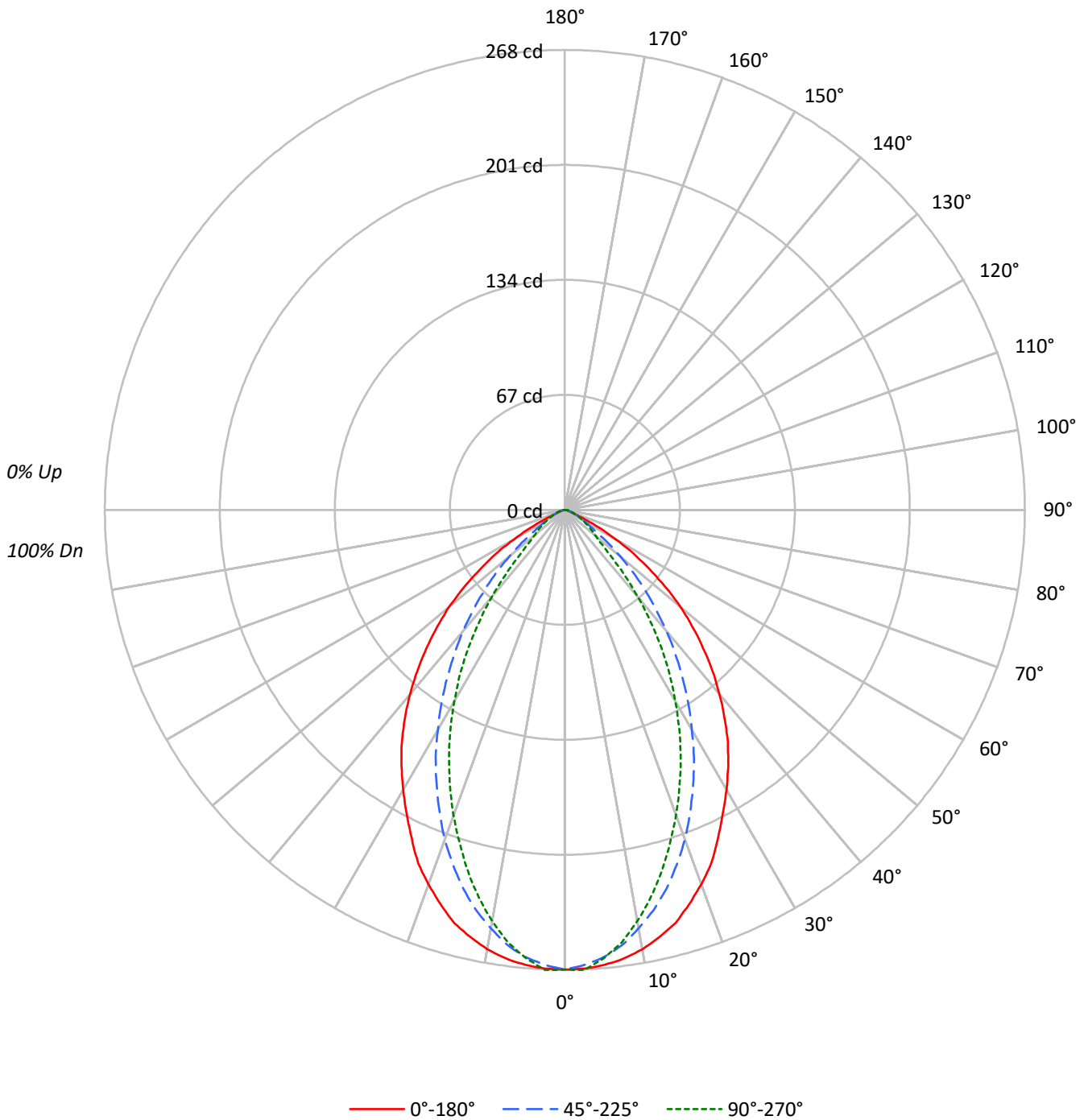
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 345.8 lumens  
Efficiency: N/A  
Efficacy: 29.6 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	3146	3146	3146
5°	3138	3085	3089
10°	3100	2952	2902
15°	3029	2778	2651
20°	2902	2554	2368
25°	2735	2289	2069
30°	2553	2007	1744
35°	2372	1712	1403
40°	2149	1412	1016
45°	1893	1094	613
50°	1606	765	417
55°	1222	459	348
60°	798	291	272
65°	333	220	220
70°	113	158	172
75°	95	113	132
80°	54	81	115
85°	54	54	108

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1893 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.7	7.2
10°-20°	64.7	18.7
20°-30°	83.0	24.0
30°-40°	77.9	22.5
40°-50°	54.4	15.7
50°-60°	28.1	8.1
60°-70°	9.6	2.8
70°-80°	2.7	0.8
80°-90°	0.6	0.2
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°	172.5	49.9
0°-40°	250.4	72.4
0°-60°	332.9	96.3
0°-90°	345.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	345.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	268	268	268	268	268	
5°	266	266	262	263	262	25
15°	249	243	228	221	218	70
25°	211	198	177	165	160	97
35°	166	145	119	104	98	103
45°	114	93	66	46	37	88
55°	60	45	22	17	17	54
65°	12	10	8	8	8	14
75°	2	2	2	3	3	2
85°	0	0	0	0	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	267.9	267.9	267.9	267.9	267.9
2.5°	267.5	267.9	265.4	267.9	268.3
5°	266.2	265.8	261.7	262.9	262.1
7.5°	263.7	262.5	255.9	254.2	254.2
10°	260.0	257.5	247.6	244.7	243.4
12.5°	255.0	251.7	238.9	233.5	231.4
15°	249.2	243.0	228.5	221.0	218.1
17.5°	240.9	232.6	216.9	208.2	203.6
20°	232.2	221.9	204.4	194.1	189.5
22.5°	223.1	210.7	190.8	179.6	174.6
25°	211.1	197.8	176.7	164.6	159.7
27.5°	199.5	185.4	163.0	149.3	144.3
30°	188.3	171.7	148.0	134.8	128.6
32.5°	177.1	158.4	133.9	119.4	113.6
35°	165.5	145.1	119.4	104.1	97.9
37.5°	153.0	132.3	105.7	89.2	81.7
40°	140.2	118.6	92.1	73.4	66.3
42.5°	127.3	106.2	78.4	59.3	51.0
45°	114.0	93.3	65.9	45.6	36.9
47.5°	100.8	80.4	53.9	33.2	27.8
50°	87.9	68.4	41.9	24.5	22.8
52.5°	73.8	56.8	31.5	20.3	19.9
55°	59.7	44.8	22.4	17.4	17.0
57.5°	47.3	34.8	16.2	14.5	14.1
60°	34.0	24.9	12.4	12.0	11.6
62.5°	22.4	17.0	10.0	9.5	9.5
65°	12.0	10.4	7.9	7.5	7.9
67.5°	5.0	5.8	5.8	6.2	6.2
70°	3.3	3.7	4.6	5.0	5.0
72.5°	2.5	2.9	3.3	3.7	3.7
75°	2.1	2.1	2.5	2.9	2.9
77.5°	1.2	1.7	1.7	2.1	2.5
80°	0.8	1.2	1.2	1.7	1.7
82.5°	0.4	0.8	0.8	1.2	1.2
85°	0.4	0.4	0.4	0.4	0.8
87.5°	0.0	0.0	0.0	0.0	0.4
90°	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	10.31	11.57	10.68	11.88	12.20	3.81	5.07	4.18	5.39	5.70
	3H	10.26	11.37	10.64	11.70	12.07	4.59	5.70	4.97	6.03	6.40
	4H	10.21	11.24	10.62	11.59	11.98	4.79	5.82	5.19	6.17	6.56
	6H	10.14	11.08	10.56	11.46	11.85	4.94	5.88	5.36	6.25	6.65
	8H	10.10	10.99	10.53	11.38	11.79	4.97	5.86	5.41	6.26	6.66
	12H	10.05	10.91	10.49	11.29	11.72	4.99	5.84	5.42	6.22	6.65
4H	2H	10.16	11.19	10.56	11.54	11.92	4.07	5.10	4.48	5.46	5.84
	3H	10.14	10.98	10.56	11.38	11.79	4.98	5.82	5.40	6.22	6.63
	4H	10.09	10.83	10.53	11.25	11.70	5.25	6.00	5.69	6.42	6.86
	6H	10.03	10.67	10.50	11.12	11.59	5.48	6.12	5.94	6.56	7.03
	8H	9.98	10.58	10.45	11.02	11.50	5.54	6.13	6.01	6.58	7.05
	12H	9.94	10.46	10.42	10.94	11.42	5.57	6.09	6.06	6.58	7.05
8H	4H	9.98	10.57	10.45	11.02	11.49	5.24	5.83	5.71	6.28	6.75
	6H	9.92	10.40	10.42	10.90	11.38	5.52	6.00	6.02	6.50	6.98
	8H	9.86	10.30	10.39	10.82	11.31	5.62	6.05	6.14	6.57	7.06
	12H	9.82	10.21	10.34	10.71	11.28	5.68	6.07	6.20	6.56	7.14
12H	4H	9.93	10.46	10.42	10.94	11.42	5.20	5.72	5.69	6.21	6.68
	6H	9.86	10.29	10.38	10.81	11.30	5.48	5.91	6.00	6.43	6.92
	8H	9.83	10.21	10.34	10.71	11.28	5.61	5.99	6.12	6.49	7.06