

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: P1059594

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059594  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

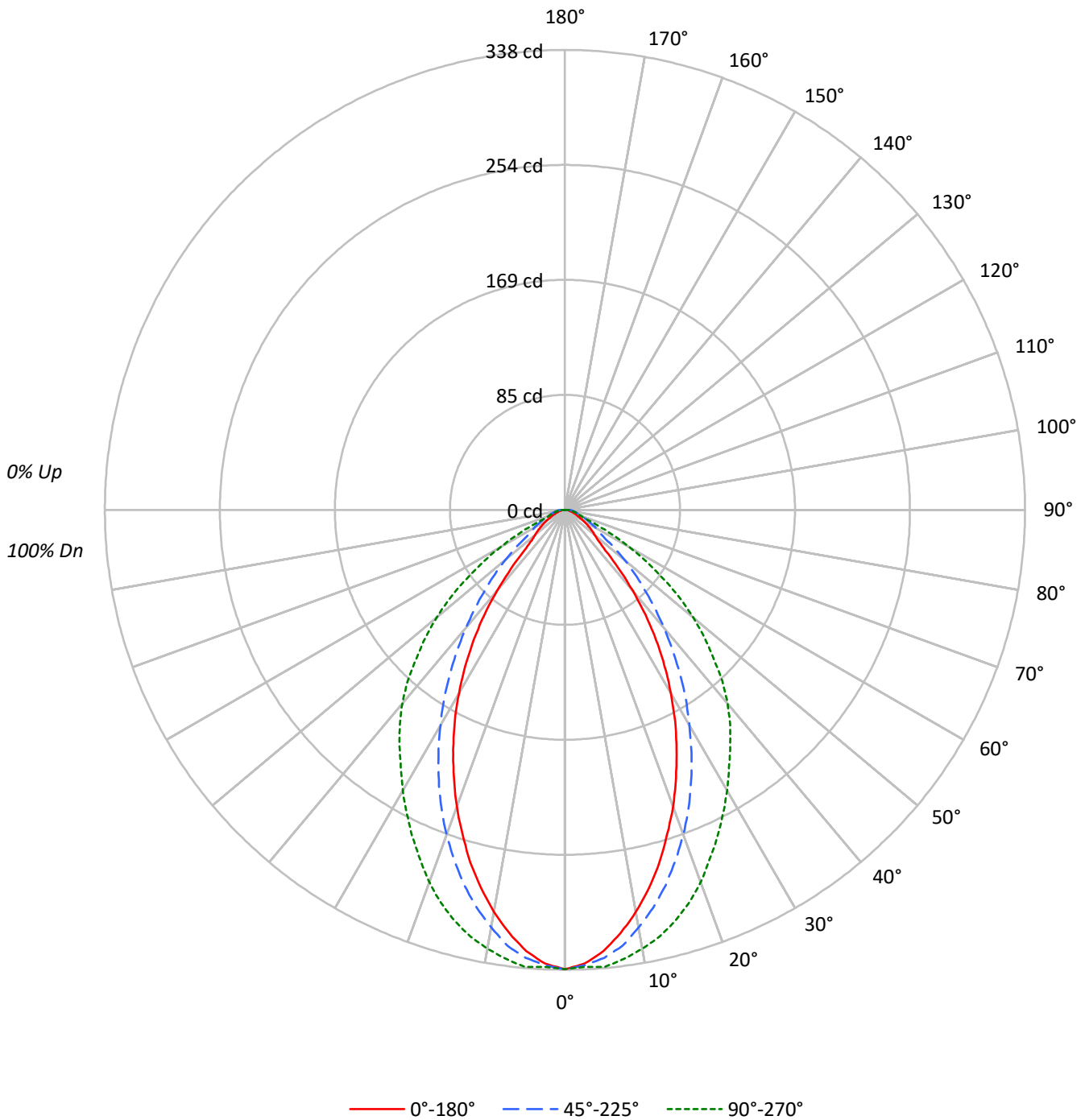
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 453.2 lumens  
Efficiency: N/A  
Efficacy: 38.7 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.08 / 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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

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

	0°	45°	90°
0°	3964	3964	3964
5°	3836	3895	3973
10°	3579	3715	3905
15°	3263	3472	3803
20°	2903	3175	3641
25°	2515	2841	3433
30°	2110	2479	3230
35°	1671	2110	3036
40°	1183	1735	2848
45°	696	1372	2562
50°	521	1041	2245
55°	438	704	1804
60°	355	601	1280
65°	281	514	675
70°	244	446	419
75°	227	417	399
80°	230	453	399
85°	283	674	512

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2562 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.1	6.9
10°-20°	80.7	17.8
20°-30°	102.8	22.7
30°-40°	96.7	21.3
40°-50°	69.7	15.4
50°-60°	40.2	8.9
60°-70°	18.4	4.1
70°-80°	9.2	2.0
80°-90°	4.3	1.0
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°	214.6	47.4
0°-40°	311.3	68.7
0°-60°	421.2	93.0
0°-90°	453.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	453.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	338	338	338	338	338	
5°	325	331	330	334	337	30
15°	268	278	286	302	313	75
25°	194	204	219	244	265	89
35°	117	127	147	181	212	72
45°	42	52	83	124	154	35
55°	21	22	34	65	88	19
65°	10	14	18	20	24	10
75°	5	10	9	9	9	5
85°	2	5	5	5	4	2
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	337.6	337.6	337.6	337.6	337.6
2.5°	333.8	338.0	335.0	335.5	336.3
5°	325.4	330.8	330.4	333.8	337.1
7.5°	313.7	319.9	323.3	328.3	332.9
10°	300.2	307.4	311.6	320.8	327.5
12.5°	284.7	293.9	299.4	311.6	321.2
15°	268.4	278.0	285.6	301.5	312.8
17.5°	249.9	260.4	270.0	288.9	302.8
20°	232.3	242.4	254.1	274.7	291.4
22.5°	213.0	223.9	237.3	259.1	278.0
25°	194.1	204.2	219.3	243.6	265.0
27.5°	175.3	185.3	201.3	228.1	251.6
30°	155.6	166.1	182.8	212.6	238.2
32.5°	136.3	146.3	165.2	197.5	224.3
35°	116.6	126.6	147.2	181.1	211.8
37.5°	97.3	107.8	129.6	167.7	199.2
40°	77.2	88.5	113.2	153.9	185.8
42.5°	58.3	70.4	96.9	139.6	171.1
45°	41.9	52.4	82.6	124.1	154.3
47.5°	32.7	38.2	69.6	108.2	138.8
50°	28.5	29.4	57.0	93.5	122.9
52.5°	24.7	25.6	44.9	79.7	106.1
55°	21.4	22.2	34.4	65.4	88.1
57.5°	18.0	19.3	28.5	52.0	70.9
60°	15.1	16.8	25.6	39.8	54.5
62.5°	12.2	15.1	21.8	29.4	39.0
65°	10.1	14.3	18.5	20.5	24.3
67.5°	8.4	13.0	15.5	14.7	14.3
70°	7.1	11.7	13.0	11.7	12.2
72.5°	5.9	10.9	10.9	10.1	10.1
75°	5.0	9.6	9.2	8.8	8.8
77.5°	4.2	8.4	8.0	7.5	7.1
80°	3.4	6.7	6.7	6.3	5.9
82.5°	2.9	5.5	5.5	5.5	4.6
85°	2.1	4.6	5.0	4.6	3.8
87.5°	1.7	4.2	4.2	3.8	2.5
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	4.76	6.08	5.12	6.39	6.70	12.12	13.44	12.48	13.75	14.07
	3H	6.14	7.31	6.52	7.64	8.01	12.35	13.52	12.73	13.85	14.21
	4H	6.69	7.78	7.10	8.13	8.52	12.47	13.56	12.87	13.91	14.29
	6H	7.13	8.13	7.55	8.50	8.90	12.58	13.58	12.99	13.95	14.35
	8H	7.31	8.26	7.74	8.65	9.05	12.63	13.58	13.06	13.97	14.38
	12H	7.46	8.37	7.89	8.75	9.18	12.69	13.60	13.12	13.98	14.41
4H	2H	5.86	6.95	6.26	7.30	7.69	12.08	13.17	12.48	13.52	13.90
	3H	7.52	8.41	7.93	8.82	9.22	12.44	13.33	12.85	13.74	14.14
	4H	8.32	9.12	8.76	9.54	9.98	12.64	13.43	13.07	13.85	14.30
	6H	8.96	9.65	9.42	10.10	10.57	12.86	13.55	13.32	14.00	14.47
	8H	9.20	9.84	9.67	10.29	10.76	12.97	13.61	13.44	14.06	14.53
	12H	9.41	9.98	9.90	10.47	10.94	13.10	13.67	13.58	14.15	14.62
8H	4H	8.77	9.41	9.23	9.86	10.33	12.67	13.32	13.14	13.77	14.24
	6H	9.68	10.21	10.18	10.71	11.19	13.00	13.53	13.50	14.03	14.51
	8H	10.10	10.58	10.62	11.09	11.59	13.19	13.67	13.71	14.18	14.68
	12H	10.52	10.94	11.03	11.44	12.01	13.44	13.87	13.96	14.36	14.93
12H	4H	8.82	9.39	9.31	9.88	10.35	12.66	13.23	13.15	13.72	14.19
	6H	9.82	10.29	10.34	10.81	11.30	13.02	13.49	13.54	14.01	14.50
	8H	10.36	10.78	10.87	11.28	11.85	13.28	13.70	13.79	14.19	14.76