

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: P1059649

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059649
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D950-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

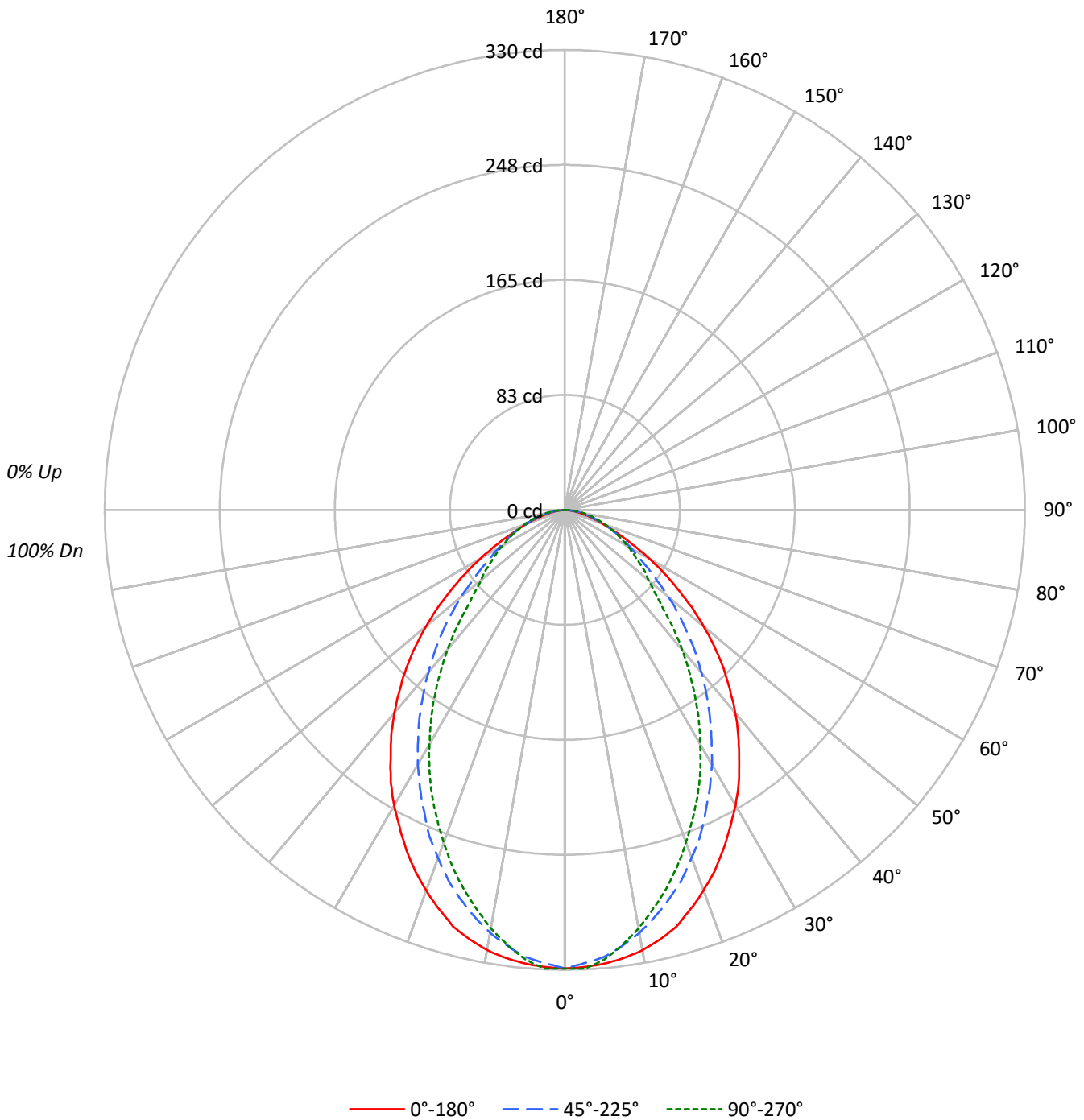
Lumens per Lamp: N/A
Luminaire Lumens: 575.7 lumens
Efficiency: N/A
Efficacy: 49.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3864	3864	3864
5°	3852	3796	3819
10°	3825	3675	3637
15°	3761	3516	3420
20°	3634	3321	3174
25°	3485	3095	2922
30°	3321	2860	2633
35°	3125	2603	2331
40°	2917	2335	2007
45°	2674	2063	1649
50°	2371	1770	1430
55°	2017	1482	1312
60°	1644	1292	1217
65°	1253	1142	1131
70°	978	1020	1061
75°	789	916	989
80°	588	751	913
85°	323	485	795

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.6	5.3
10°-20°	82.2	14.3
20°-30°	111.7	19.4
30°-40°	115.8	20.1
40°-50°	97.7	17.0
50°-60°	69.4	12.0
60°-70°	42.4	7.4
70°-80°	21.1	3.7
80°-90°	4.8	0.8
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°	224.5	39.0
0°-40°	340.3	59.1
0°-60°	507.4	88.1
0°-90°	575.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	575.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	329	329	329	329	329	
5°	327	327	322	324	324	31
15°	309	303	289	284	281	87
25°	269	257	239	230	226	124
35°	218	201	182	169	163	136
45°	161	144	124	107	99	124
55°	98	88	72	66	64	88
65°	45	44	41	41	41	46
75°	17	19	20	21	22	19
85°	2	3	4	5	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	329.1	329.1	329.1	329.1	329.1
2.5°	328.4	328.7	325.6	329.1	329.5
5°	326.8	326.8	322.0	324.0	324.0
7.5°	324.4	323.6	315.7	315.7	314.9
10°	320.8	318.5	308.2	306.2	305.0
12.5°	315.7	311.7	299.1	295.5	293.1
15°	309.4	303.4	289.2	284.0	281.3
17.5°	300.3	294.3	278.5	271.4	268.2
20°	290.8	282.1	265.8	258.7	254.0
22.5°	280.5	269.4	253.6	244.9	239.7
25°	269.0	257.1	238.9	230.2	225.5
27.5°	256.7	243.7	225.1	215.2	210.5
30°	244.9	229.8	210.9	199.8	194.2
32.5°	232.2	215.2	195.8	184.4	178.8
35°	218.0	201.4	181.6	168.9	162.6
37.5°	204.5	187.5	166.9	153.5	146.4
40°	190.3	173.3	152.3	138.5	130.9
42.5°	175.3	159.0	138.5	122.2	115.1
45°	161.0	144.0	124.2	107.2	99.3
47.5°	145.6	129.8	110.4	93.0	87.4
50°	129.8	115.1	96.9	81.1	78.3
52.5°	114.3	102.1	83.5	73.2	72.0
55°	98.5	88.2	72.4	66.1	64.1
57.5°	83.9	76.4	62.1	58.9	58.2
60°	70.0	63.7	55.0	53.0	51.8
62.5°	56.6	53.0	47.9	47.1	46.3
65°	45.1	43.5	41.1	41.1	40.7
67.5°	35.6	35.6	35.2	36.0	35.6
70°	28.5	28.9	29.7	30.5	30.9
72.5°	22.5	23.7	24.5	25.7	26.1
75°	17.4	18.6	20.2	21.0	21.8
77.5°	12.7	13.8	15.4	16.6	17.4
80°	8.7	9.5	11.1	12.7	13.5
82.5°	5.5	5.9	7.1	8.7	9.5
85°	2.4	2.8	3.6	5.1	5.9
87.5°	0.0	0.0	0.4	1.6	2.8
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	13.51	14.96	13.88	15.27	15.59	11.60	13.05	11.96	13.36	13.68
	3H	14.41	15.70	14.78	16.03	16.39	13.18	14.47	13.55	14.80	15.16
	4H	14.69	15.90	15.09	16.25	16.63	13.77	14.98	14.17	15.33	15.71
	6H	14.84	15.96	15.25	16.32	16.72	14.22	15.34	14.64	15.71	16.10
	8H	14.86	15.92	15.29	16.31	16.72	14.37	15.44	14.80	15.83	16.23
	12H	14.85	15.87	15.29	16.25	16.68	14.47	15.49	14.90	15.87	16.30
4H	2H	13.75	14.96	14.15	15.31	15.69	12.14	13.35	12.54	13.70	14.08
	3H	14.87	15.87	15.28	16.27	16.67	13.92	14.92	14.33	15.32	15.72
	4H	15.26	16.15	15.69	16.57	17.01	14.63	15.53	15.06	15.95	16.39
	6H	15.50	16.27	15.96	16.72	17.18	15.20	15.98	15.66	16.43	16.89
	8H	15.54	16.27	16.00	16.71	17.18	15.40	16.12	15.86	16.57	17.04
	12H	15.55	16.19	16.03	16.67	17.15	15.53	16.18	16.02	16.66	17.13
8H	4H	15.41	16.14	15.88	16.59	17.05	14.84	15.57	15.31	16.01	16.48
	6H	15.72	16.32	16.22	16.82	17.30	15.52	16.12	16.02	16.61	17.09
	8H	15.80	16.34	16.32	16.85	17.34	15.77	16.31	16.29	16.82	17.31
	12H	15.84	16.31	16.35	16.80	17.37	15.98	16.46	16.49	16.95	17.52
12H	4H	15.42	16.06	15.90	16.54	17.02	14.84	15.48	15.32	15.97	16.44
	6H	15.74	16.28	16.26	16.79	17.28	15.53	16.06	16.04	16.58	17.06
	8H	15.85	16.33	16.36	16.82	17.39	15.83	16.30	16.34	16.80	17.36