

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: P1059593

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)
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-S
Description: DEFINE 3 SILVER 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

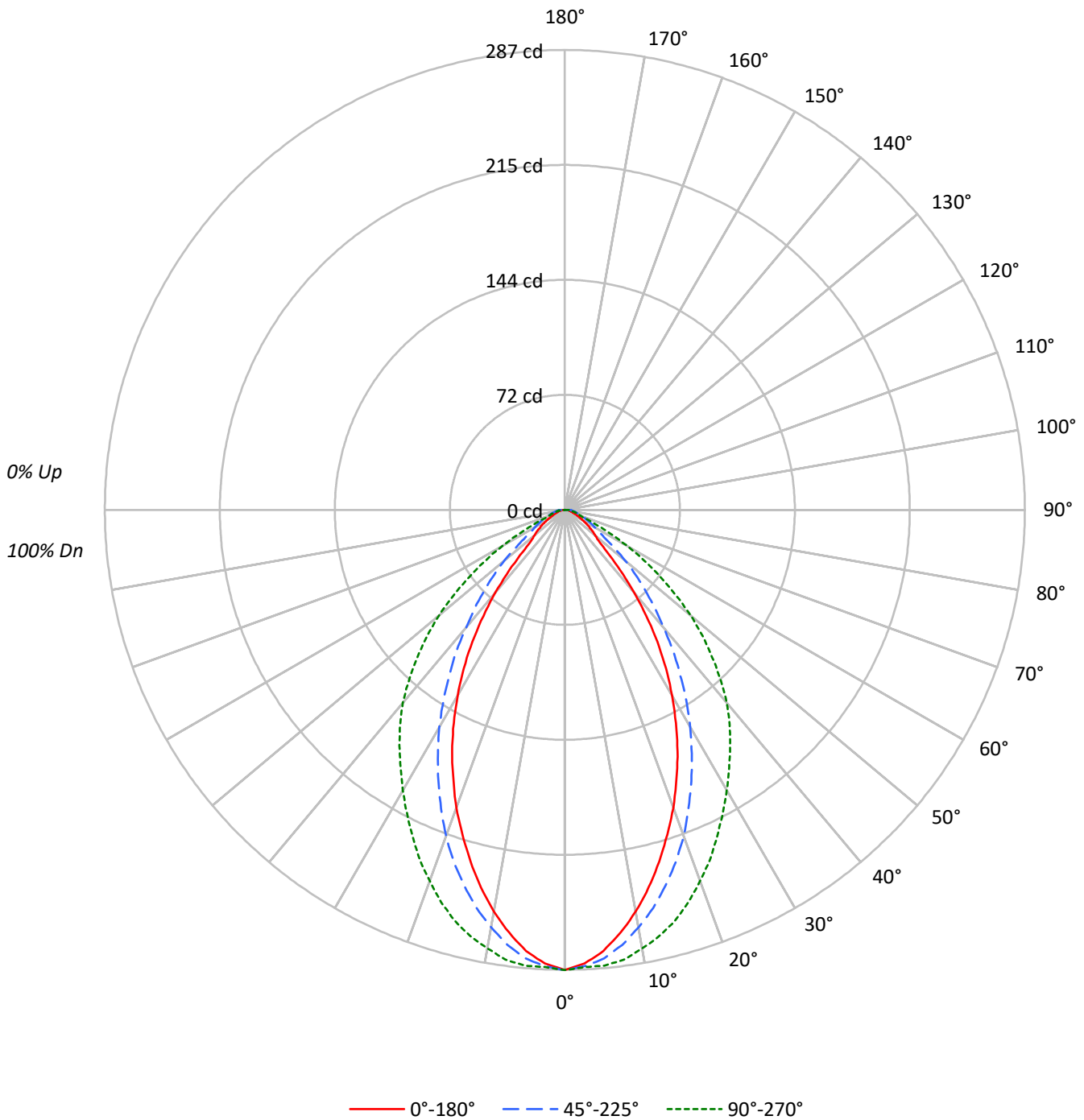
Lumens per Lamp: N/A
Luminaire Lumens: 384.6 lumens
Efficiency: N/A
Efficacy: 32.9 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	101	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	91	81	74	69	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	61	69	64	60	68	63	59	58
6	79	68	61	56	78	67	60	55	66	60	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	56	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	50	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3372	3372	3372
5°	3257	3311	3365
10°	3035	3154	3314
15°	2762	2950	3226
20°	2473	2708	3080
25°	2156	2418	2911
30°	1813	2121	2740
35°	1442	1796	2577
40°	1029	1465	2410
45°	613	1176	2159
50°	451	895	1869
55°	377	610	1484
60°	305	503	1043
65°	245	431	558
70°	203	374	347
75°	191	363	322
80°	196	399	311
85°	283	566	391

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2159 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.4	6.9
10°-20°	68.5	17.8
20°-30°	87.4	22.7
30°-40°	82.2	21.4
40°-50°	59.1	15.4
50°-60°	33.9	8.8
60°-70°	15.5	4.0
70°-80°	7.8	2.0
80°-90°	3.8	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°	182.3	47.4
0°-40°	264.6	68.8
0°-60°	357.5	93.0
0°-90°	384.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	384.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	287	287	287	287	287	
5°	276	282	281	283	286	26
15°	227	235	243	256	265	63
25°	166	174	187	207	225	76
35°	101	108	125	154	180	62
45°	37	45	71	104	130	31
55°	18	19	30	55	72	17
65°	9	12	16	17	20	9
75°	4	8	8	7	7	5
85°	2	4	4	4	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	287.2	287.2	287.2	287.2	287.2
2.5°	283.4	287.6	285.1	285.1	285.5
5°	276.3	281.7	280.9	283.0	285.5
7.5°	266.2	272.1	273.8	278.8	283.0
10°	254.5	261.2	264.5	272.5	277.9
12.5°	241.5	249.0	254.5	264.5	272.5
15°	227.2	235.2	242.7	255.7	265.4
17.5°	212.5	220.5	230.2	245.2	256.6
20°	197.9	205.8	216.7	232.7	246.5
22.5°	181.9	189.9	201.6	219.7	236.4
25°	166.4	174.0	186.6	206.7	224.7
27.5°	150.1	157.6	171.5	193.3	213.4
30°	133.7	141.3	156.4	179.8	202.1
32.5°	117.4	124.5	140.9	166.9	190.7
35°	100.6	107.7	125.3	153.9	179.8
37.5°	83.4	90.6	111.1	142.1	168.9
40°	67.1	75.0	95.6	130.4	157.2
42.5°	51.1	59.5	83.0	117.8	143.8
45°	36.9	44.9	70.8	104.4	130.0
47.5°	28.1	32.3	59.9	91.0	116.5
50°	24.7	25.2	49.0	78.8	102.3
52.5°	21.4	21.8	38.1	67.1	87.2
55°	18.4	18.9	29.8	54.9	72.5
57.5°	15.5	16.3	24.3	43.6	58.3
60°	13.0	14.7	21.4	33.1	44.4
62.5°	10.5	13.4	18.4	24.3	31.9
65°	8.8	12.2	15.5	17.2	20.1
67.5°	7.1	11.3	13.0	12.2	12.2
70°	5.9	10.1	10.9	10.1	10.1
72.5°	5.0	9.6	9.2	8.4	8.4
75°	4.2	8.4	8.0	7.1	7.1
77.5°	3.8	7.1	6.7	6.3	5.9
80°	2.9	5.9	5.9	5.4	4.6
82.5°	2.5	5.0	5.0	4.6	3.8
85°	2.1	4.2	4.2	3.8	2.9
87.5°	1.7	3.8	3.8	3.4	2.1
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	4.19	5.51	4.56	5.82	6.14	11.43	12.75	11.80	13.06	13.38
	3H	5.60	6.77	5.98	7.10	7.46	11.67	12.84	12.05	13.17	13.53
	4H	6.16	7.25	6.56	7.60	7.98	11.78	12.87	12.18	13.22	13.60
	6H	6.62	7.62	7.04	7.99	8.39	11.88	12.88	12.30	13.26	13.65
	8H	6.80	7.75	7.24	8.14	8.55	11.93	12.88	12.36	13.27	13.68
	12H	7.00	7.90	7.43	8.29	8.72	11.98	12.89	12.41	13.27	13.70
4H	2H	5.27	6.36	5.67	6.71	7.09	11.39	12.48	11.79	12.83	13.22
	3H	6.96	7.86	7.38	8.26	8.66	11.76	12.66	12.18	13.06	13.46
	4H	7.80	8.60	8.23	9.02	9.46	11.95	12.74	12.38	13.16	13.61
	6H	8.46	9.15	8.92	9.60	10.06	12.17	12.86	12.63	13.30	13.77
	8H	8.71	9.36	9.18	9.80	10.27	12.27	12.91	12.74	13.36	13.83
	12H	8.97	9.54	9.45	10.02	10.49	12.38	12.96	12.87	13.44	13.91
8H	4H	8.24	8.88	8.71	9.33	9.80	11.99	12.64	12.46	13.08	13.55
	6H	9.19	9.72	9.69	10.22	10.70	12.32	12.85	12.82	13.35	13.83
	8H	9.65	10.13	10.17	10.64	11.13	12.51	12.99	13.03	13.50	13.99
	12H	10.13	10.55	10.64	11.05	11.62	12.74	13.17	13.26	13.66	14.23
12H	4H	8.30	8.87	8.78	9.35	9.82	11.98	12.56	12.47	13.04	13.51
	6H	9.34	9.81	9.86	10.33	10.82	12.35	12.83	12.87	13.34	13.83
	8H	9.92	10.35	10.44	10.84	11.41	12.61	13.03	13.12	13.52	14.10