

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: P1059720

Luminaire Tested: S123RDR-H560D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059720
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-H560D940-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, 90 CRI LEDS
Ballast/Driver: -

Summary

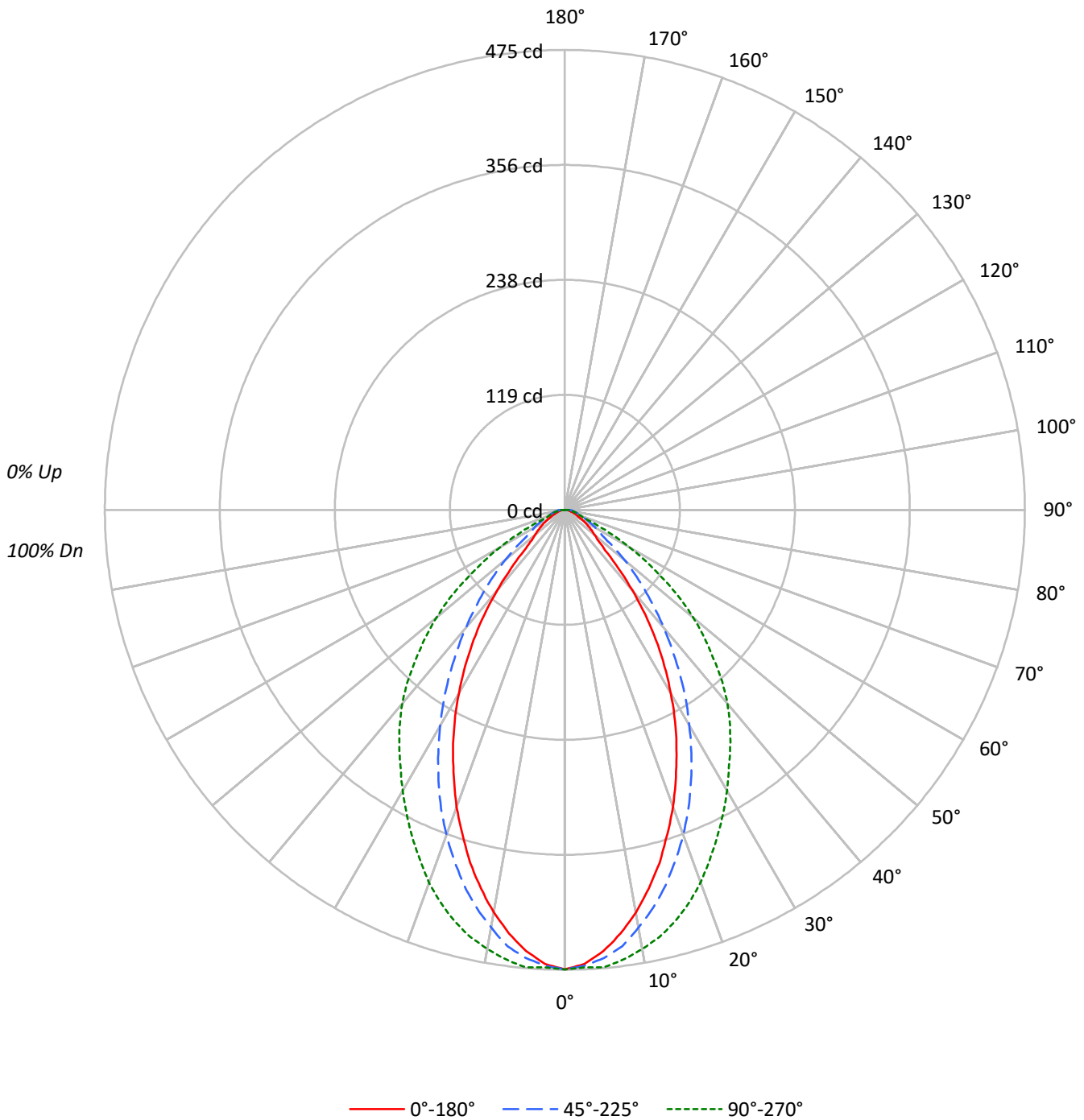
Lumens per Lamp: N/A
Luminaire Lumens: 637.2 lumens
Efficiency: N/A
Efficacy: 36.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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°	5574	5574	5574
5°	5394	5476	5588
10°	5034	5224	5491
15°	4588	4881	5348
20°	4082	4465	5121
25°	3537	3996	4829
30°	2967	3486	4541
35°	2349	2967	4269
40°	1663	2440	4004
45°	980	1930	3604
50°	733	1465	3157
55°	616	991	2534
60°	498	845	1801
65°	395	720	950
70°	343	628	587
75°	322	590	563
80°	318	636	561
85°	391	957	714

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3604 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	6.9
10°-20°	113.5	17.8
20°-30°	144.6	22.7
30°-40°	136.0	21.3
40°-50°	98.0	15.4
50°-60°	56.6	8.9
60°-70°	25.9	4.1
70°-80°	12.9	2.0
80°-90°	6.1	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°	301.8	47.4
0°-40°	437.8	68.7
0°-60°	592.3	93.0
0°-90°	637.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	637.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	475	475	475	475	475	
5°	458	465	465	469	474	43
15°	377	391	402	424	440	105
25°	273	287	308	343	373	125
35°	164	178	207	255	298	102
45°	59	74	116	174	217	50
55°	30	31	48	92	124	27
65°	14	20	26	29	34	14
75°	7	14	13	12	12	8
85°	3	6	7	6	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	474.7	474.7	474.7	474.7	474.7
2.5°	469.4	475.3	471.1	471.7	472.9
5°	457.6	465.2	464.6	469.4	474.1
7.5°	441.1	449.9	454.6	461.7	468.2
10°	422.2	432.2	438.1	451.1	460.5
12.5°	400.4	413.3	421.0	438.1	451.7
15°	377.4	390.9	401.5	424.0	439.9
17.5°	351.4	366.2	379.7	406.3	425.7
20°	326.7	340.8	357.3	386.2	409.8
22.5°	299.5	314.9	333.7	364.4	390.9
25°	273.0	287.2	308.4	342.6	372.7
27.5°	246.5	260.6	283.0	320.8	353.8
30°	218.8	233.5	257.1	298.9	334.9
32.5°	191.6	205.8	232.3	277.7	315.5
35°	163.9	178.1	207.0	254.7	297.8
37.5°	136.8	151.5	182.2	235.9	280.1
40°	108.5	124.4	159.2	216.4	261.2
42.5°	82.0	99.1	136.2	196.4	240.6
45°	59.0	73.7	116.2	174.5	217.0
47.5°	46.0	53.7	97.9	152.1	195.2
50°	40.1	41.3	80.2	131.5	172.8
52.5°	34.8	36.0	63.1	112.0	149.2
55°	30.1	31.3	48.4	92.0	123.8
57.5°	25.4	27.1	40.1	73.1	99.6
60°	21.2	23.6	36.0	56.0	76.7
62.5°	17.1	21.2	30.7	41.3	54.8
65°	14.2	20.0	25.9	28.9	34.2
67.5°	11.8	18.3	21.8	20.6	20.0
70°	10.0	16.5	18.3	16.5	17.1
72.5°	8.3	15.3	15.3	14.2	14.2
75°	7.1	13.6	13.0	12.4	12.4
77.5°	5.9	11.8	11.2	10.6	10.0
80°	4.7	9.4	9.4	8.8	8.3
82.5°	4.1	7.7	7.7	7.7	6.5
85°	2.9	6.5	7.1	6.5	5.3
87.5°	2.4	5.9	5.9	5.3	3.5
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	5.94	7.26	6.30	7.57	7.88	13.30	14.62	13.67	14.93	15.25
	3H	7.33	8.50	7.71	8.83	9.19	13.53	14.70	13.91	15.03	15.39
	4H	7.88	8.97	8.29	9.32	9.71	13.65	14.74	14.05	15.09	15.47
	6H	8.32	9.32	8.73	9.69	10.08	13.76	14.76	14.18	15.13	15.53
	8H	8.49	9.44	8.92	9.83	10.24	13.81	14.76	14.24	15.15	15.56
	12H	8.64	9.55	9.08	9.93	10.36	13.87	14.78	14.30	15.16	15.59
4H	2H	7.03	8.13	7.44	8.48	8.86	13.26	14.35	13.66	14.70	15.08
	3H	8.70	9.59	9.11	10.00	10.40	13.62	14.51	14.03	14.92	15.32
	4H	9.51	10.31	9.95	10.73	11.18	13.82	14.62	14.25	15.03	15.48
	6H	10.15	10.84	10.61	11.28	11.75	14.04	14.73	14.51	15.18	15.65
	8H	10.38	11.03	10.85	11.47	11.95	14.15	14.79	14.62	15.24	15.71
	12H	10.59	11.16	11.08	11.65	12.12	14.28	14.85	14.76	15.33	15.81
8H	4H	9.96	10.60	10.42	11.05	11.52	13.85	14.50	14.32	14.95	15.42
	6H	10.86	11.39	11.37	11.89	12.37	14.18	14.71	14.68	15.21	15.69
	8H	11.28	11.76	11.80	12.28	12.77	14.37	14.85	14.89	15.36	15.86
	12H	11.70	12.12	12.21	12.62	13.19	14.62	15.05	15.14	15.54	16.11
12H	4H	10.01	10.58	10.50	11.07	11.54	13.84	14.41	14.33	14.90	15.37
	6H	11.00	11.48	11.52	11.99	12.48	14.20	14.67	14.72	15.19	15.68
	8H	11.54	11.96	12.05	12.46	13.03	14.46	14.88	14.97	15.37	15.94