

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: P1060856

Luminaire Tested: S124RDR-H350D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060856
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D940-X4F0-XX-UDD-WVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

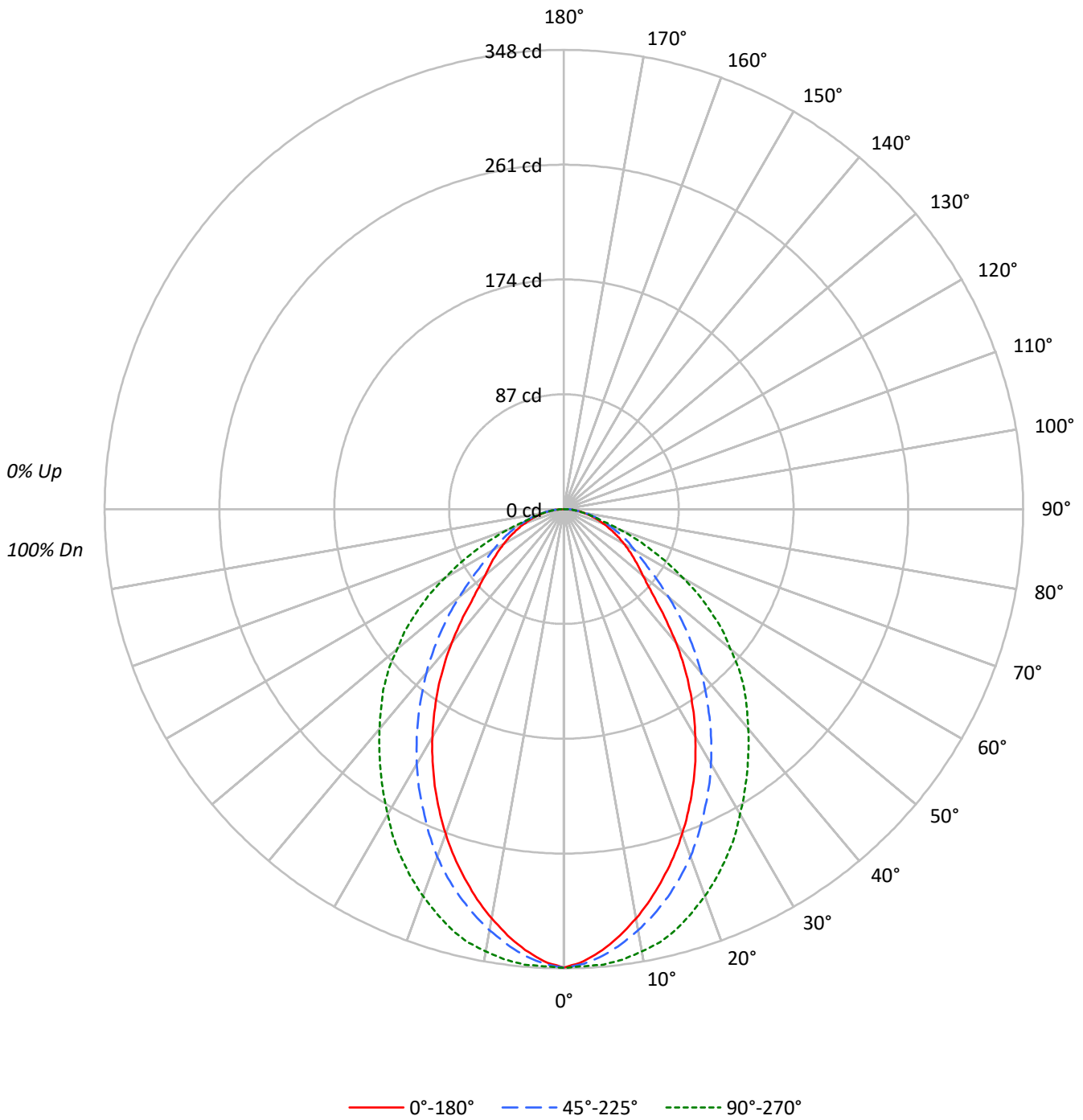
Lumens per Lamp: N/A
Luminaire Lumens: 632.6 lumens
Efficiency: N/A
Efficacy: 54.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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										
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	50	30	10	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50														
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2992	2992	2992
5°	2899	2937	2994
10°	2754	2834	2975
15°	2584	2711	2938
20°	2400	2570	2860
25°	2198	2394	2769
30°	1981	2216	2655
35°	1746	2022	2546
40°	1486	1822	2444
45°	1207	1610	2355
50°	1044	1385	2205
55°	968	1176	2045
60°	902	1061	1795
65°	846	994	1491
70°	788	916	1128
75°	752	848	812
80°	704	779	684
85°	652	721	543

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2355 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	5.1
10°-20°	86.2	13.6
20°-30°	117.7	18.6
30°-40°	123.3	19.5
40°-50°	106.8	16.9
50°-60°	80.2	12.7
60°-70°	51.7	8.2
70°-80°	26.5	4.2
80°-90°	7.9	1.3
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°	236.0	37.3
0°-40°	359.4	56.8
0°-60°	546.4	86.4
0°-90°	632.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	632.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	348	348	348	348	348	
5°	335	340	340	342	346	31
15°	290	297	304	318	330	81
25°	231	240	252	272	291	106
35°	166	176	192	218	242	103
45°	99	109	132	165	193	78
55°	64	67	78	112	136	58
65°	42	42	49	59	73	41
75°	23	25	26	25	24	24
85°	7	8	7	7	6	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	347.5	347.5	347.5	347.5	347.5
2.5°	343.1	347.5	344.9	345.6	346.7
5°	335.4	340.5	339.8	342.4	346.4
7.5°	326.0	331.4	332.5	338.3	344.2
10°	315.0	321.2	324.1	332.9	340.2
12.5°	303.0	309.6	314.7	325.6	336.2
15°	289.9	297.2	304.1	318.0	329.6
17.5°	276.4	283.7	292.8	308.1	321.2
20°	261.9	269.9	280.4	296.5	312.1
22.5°	246.9	255.3	266.6	284.1	302.3
25°	231.3	240.0	252.0	271.7	291.4
27.5°	215.6	224.4	237.8	258.6	280.1
30°	199.2	208.3	222.9	245.5	267.0
32.5°	182.8	192.7	207.6	231.6	254.6
35°	166.1	175.5	192.3	217.8	242.2
37.5°	149.3	159.2	177.0	204.3	229.8
40°	132.2	142.4	162.1	190.8	217.4
42.5°	115.1	126.0	146.8	177.0	205.0
45°	99.1	109.3	132.2	164.6	193.4
47.5°	87.0	94.0	117.6	152.6	180.3
50°	77.9	81.6	103.4	139.5	164.6
52.5°	71.0	73.6	90.3	125.3	151.9
55°	64.5	66.6	78.3	111.8	136.2
57.5°	58.6	59.7	69.2	98.7	121.3
60°	52.4	53.5	61.6	84.5	104.2
62.5°	47.0	47.7	55.4	71.0	88.5
65°	41.5	42.2	48.8	59.0	73.2
67.5°	36.4	37.5	42.6	48.1	58.3
70°	31.3	33.5	36.4	39.0	44.8
72.5°	27.0	29.1	30.6	31.3	31.7
75°	22.6	25.1	25.5	25.1	24.4
77.5°	18.2	20.4	20.4	19.7	18.9
80°	14.2	16.0	15.7	14.9	13.8
82.5°	10.6	11.7	11.3	10.6	9.5
85°	6.6	7.6	7.3	6.9	5.5
87.5°	3.3	4.4	4.0	3.6	2.2
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	10.24	11.72	10.60	12.03	12.35	14.01	15.50	14.38	15.81	16.13
	3H	11.89	13.22	12.27	13.55	13.91	15.13	16.46	15.51	16.79	17.15
	4H	12.56	13.81	12.96	14.16	14.54	15.42	16.66	15.82	17.01	17.39
	6H	13.08	14.23	13.49	14.59	14.98	15.61	16.76	16.03	17.13	17.52
	8H	13.26	14.35	13.69	14.74	15.14	15.67	16.76	16.10	17.15	17.55
	12H	13.39	14.43	13.82	14.81	15.24	15.70	16.74	16.13	17.12	17.55
4H	2H	11.02	12.27	11.42	12.61	12.99	14.17	15.42	14.57	15.77	16.15
	3H	12.88	13.91	13.29	14.31	14.72	15.49	16.52	15.90	16.92	17.32
	4H	13.69	14.62	14.12	15.04	15.48	15.89	16.82	16.33	17.24	17.68
	6H	14.34	15.14	14.80	15.59	16.05	16.21	17.01	16.67	17.46	17.92
	8H	14.57	15.32	15.03	15.77	16.23	16.30	17.05	16.76	17.50	17.97
	12H	14.74	15.41	15.22	15.89	16.36	16.36	17.04	16.85	17.52	17.99
8H	4H	14.04	14.79	14.50	15.24	15.71	16.03	16.78	16.49	17.22	17.69
	6H	14.83	15.46	15.33	15.95	16.43	16.44	17.06	16.93	17.55	18.03
	8H	15.16	15.72	15.67	16.23	16.71	16.59	17.15	17.10	17.66	18.15
	12H	15.42	15.92	15.93	16.41	16.97	16.71	17.21	17.22	17.70	18.27
12H	4H	14.07	14.74	14.55	15.22	15.69	16.03	16.70	16.51	17.18	17.65
	6H	14.90	15.46	15.41	15.97	16.45	16.46	17.02	16.97	17.53	18.02
	8H	15.28	15.78	15.79	16.27	16.84	16.66	17.16	17.17	17.65	18.21