

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: P1060703

Luminaire Tested: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060703
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-H1020D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

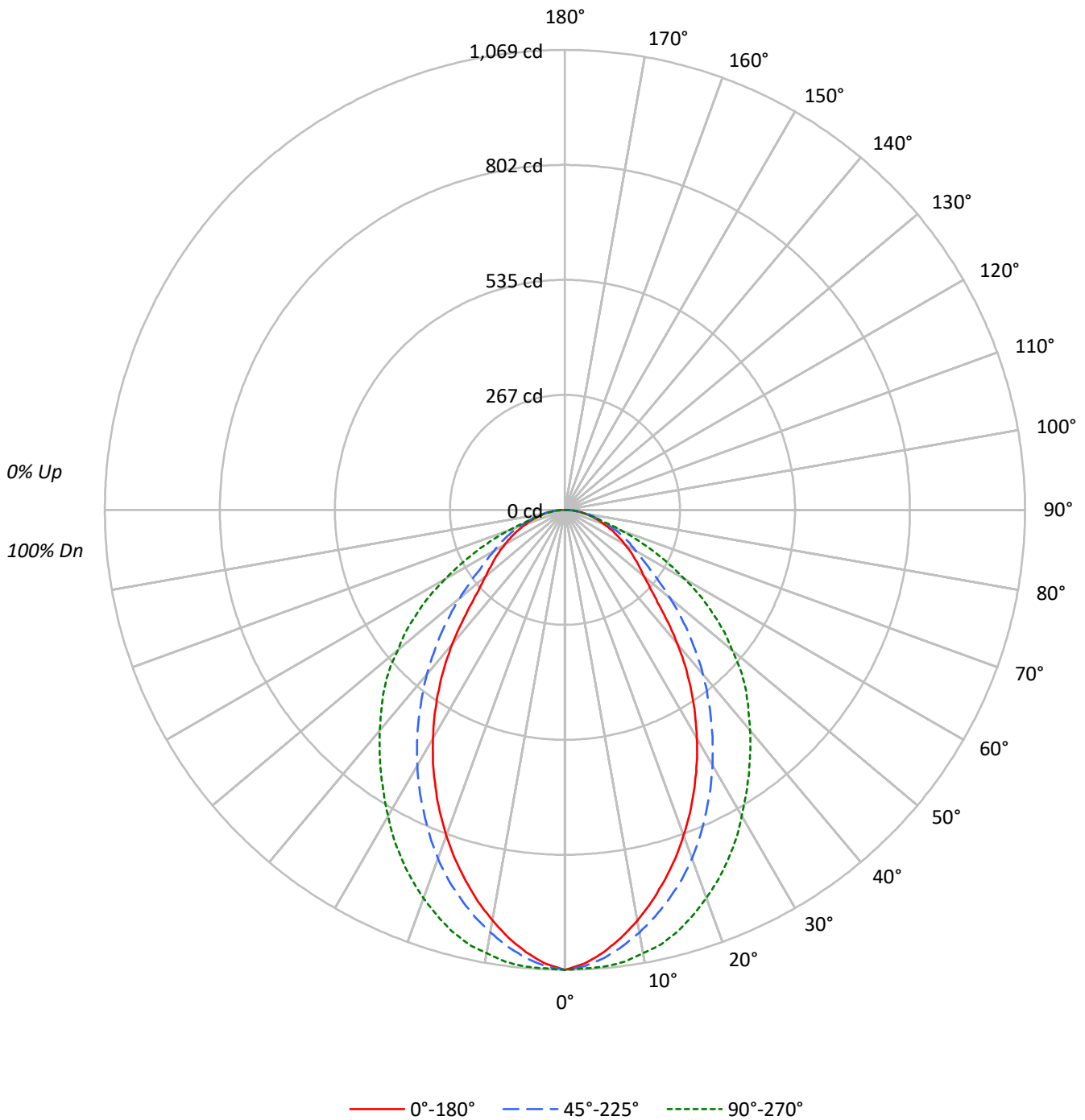
Lumens per Lamp: N/A
Luminaire Lumens: 1946.5 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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

TEST NUMBER: P1060703

CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1060703

CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9207	9207	9207
5°	8922	9038	9213
10°	8476	8721	9153
15°	7953	8343	9042
20°	7384	7908	8802
25°	6762	7368	8519
30°	6095	6820	8168
35°	5373	6220	7835
40°	4573	5606	7521
45°	3712	4954	7247
50°	3212	4264	6787
55°	2979	3618	6293
60°	2780	3262	5520
65°	2604	3060	4591
70°	2427	2822	3469
75°	2312	2612	2499
80°	2167	2390	2113
85°	1996	2213	1660

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7247 cd/sqm

TEST NUMBER: P1060703

CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.7	5.1
10°-20°	265.3	13.6
20°-30°	362.3	18.6
30°-40°	379.6	19.5
40°-50°	328.5	16.9
50°-60°	246.9	12.7
60°-70°	159.2	8.2
70°-80°	81.6	4.2
80°-90°	24.4	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°	726.3	37.3
0°-40°	1105.9	56.8
0°-60°	1681.3	86.4
0°-90°	1946.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1946.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1032	1048	1046	1054	1066	97
15°	892	914	936	978	1014	250
25°	712	739	776	836	897	327
35°	511	540	592	670	745	318
45°	305	336	407	507	595	240
55°	198	205	241	344	419	178
65°	128	130	150	182	225	127
75°	70	77	78	77	75	73
85°	20	24	22	21	17	23
90°	0	0	0	0	0	



TEST NUMBER: P1060703

CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1069.2	1069.2	1069.2	1069.2	1069.2
2.5°	1055.7	1069.2	1061.3	1063.6	1066.9
5°	1032.2	1047.9	1045.6	1053.5	1065.8
7.5°	1003.0	1019.9	1023.2	1041.2	1059.1
10°	969.4	988.5	997.4	1024.3	1046.8
12.5°	932.4	952.6	968.3	1001.9	1034.4
15°	892.1	914.5	935.8	978.4	1014.3
17.5°	850.6	873.0	901.1	948.1	988.5
20°	805.8	830.5	863.0	912.3	960.5
22.5°	759.9	785.6	820.4	874.2	930.2
25°	711.7	738.6	775.5	836.1	896.6
27.5°	663.5	690.4	731.8	795.7	861.8
30°	613.0	641.1	685.9	755.4	821.5
32.5°	562.6	592.9	638.8	712.8	783.4
35°	511.1	540.2	591.7	670.2	745.3
37.5°	459.5	489.8	544.7	628.7	707.2
40°	406.8	438.2	498.7	587.3	669.1
42.5°	354.1	387.8	451.7	544.7	631.0
45°	304.8	336.2	406.8	506.6	595.1
47.5°	267.9	289.1	362.0	469.6	554.8
50°	239.8	251.0	318.3	429.2	506.6
52.5°	218.5	226.4	277.9	385.5	467.3
55°	198.4	205.1	241.0	344.1	419.2
57.5°	180.4	183.8	212.9	303.7	373.2
60°	161.4	164.7	189.4	260.0	320.5
62.5°	144.6	146.8	170.4	218.5	272.3
65°	127.8	130.0	150.2	181.6	225.3
67.5°	112.1	115.4	131.1	147.9	179.3
70°	96.4	103.1	112.1	119.9	137.8
72.5°	82.9	89.7	94.1	96.4	97.5
75°	69.5	77.3	78.5	77.3	75.1
77.5°	56.0	62.8	62.8	60.5	58.3
80°	43.7	49.3	48.2	45.9	42.6
82.5°	32.5	35.9	34.7	32.5	29.1
85°	20.2	23.5	22.4	21.3	16.8
87.5°	10.1	13.4	12.3	11.2	6.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060703
 CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-S

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	14.15	15.63	14.51	15.94	16.26	17.92	19.40	18.28	19.72	20.03
	3H	15.80	17.13	16.18	17.46	17.82	19.03	20.36	19.41	20.69	21.05
	4H	16.47	17.72	16.87	18.07	18.44	19.32	20.57	19.72	20.92	21.30
	6H	16.98	18.13	17.40	18.50	18.89	19.52	20.67	19.93	21.04	21.43
	8H	17.16	18.26	17.59	18.65	19.05	19.57	20.67	20.00	21.06	21.46
	12H	17.29	18.34	17.72	18.72	19.15	19.60	20.65	20.03	21.03	21.46
4H	2H	14.93	16.17	15.33	16.52	16.90	18.08	19.32	18.48	19.67	20.05
	3H	16.79	17.82	17.20	18.22	18.62	19.39	20.42	19.80	20.82	21.22
	4H	17.60	18.53	18.03	18.94	19.38	19.80	20.73	20.23	21.14	21.58
	6H	18.24	19.05	18.70	19.50	19.96	20.11	20.92	20.57	21.36	21.82
	8H	18.47	19.23	18.94	19.67	20.14	20.20	20.96	20.67	21.40	21.87
	12H	18.64	19.32	19.13	19.80	20.27	20.27	20.94	20.75	21.42	21.89
8H	4H	17.95	18.70	18.41	19.15	19.61	19.93	20.68	20.39	21.13	21.60
	6H	18.74	19.36	19.24	19.86	20.33	20.34	20.96	20.84	21.46	21.93
	8H	19.06	19.62	19.58	20.13	20.62	20.49	21.05	21.01	21.56	22.05
	12H	19.33	19.82	19.84	20.31	20.88	20.62	21.11	21.13	21.60	22.17
12H	4H	17.98	18.65	18.46	19.13	19.60	19.93	20.61	20.42	21.09	21.56
	6H	18.80	19.36	19.32	19.87	20.36	20.36	20.92	20.88	21.43	21.92
	8H	19.19	19.68	19.70	20.18	20.74	20.57	21.06	21.08	21.55	22.12