

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: P1060811

Luminaire Tested: S124RDR-H350D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060811
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-H350D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

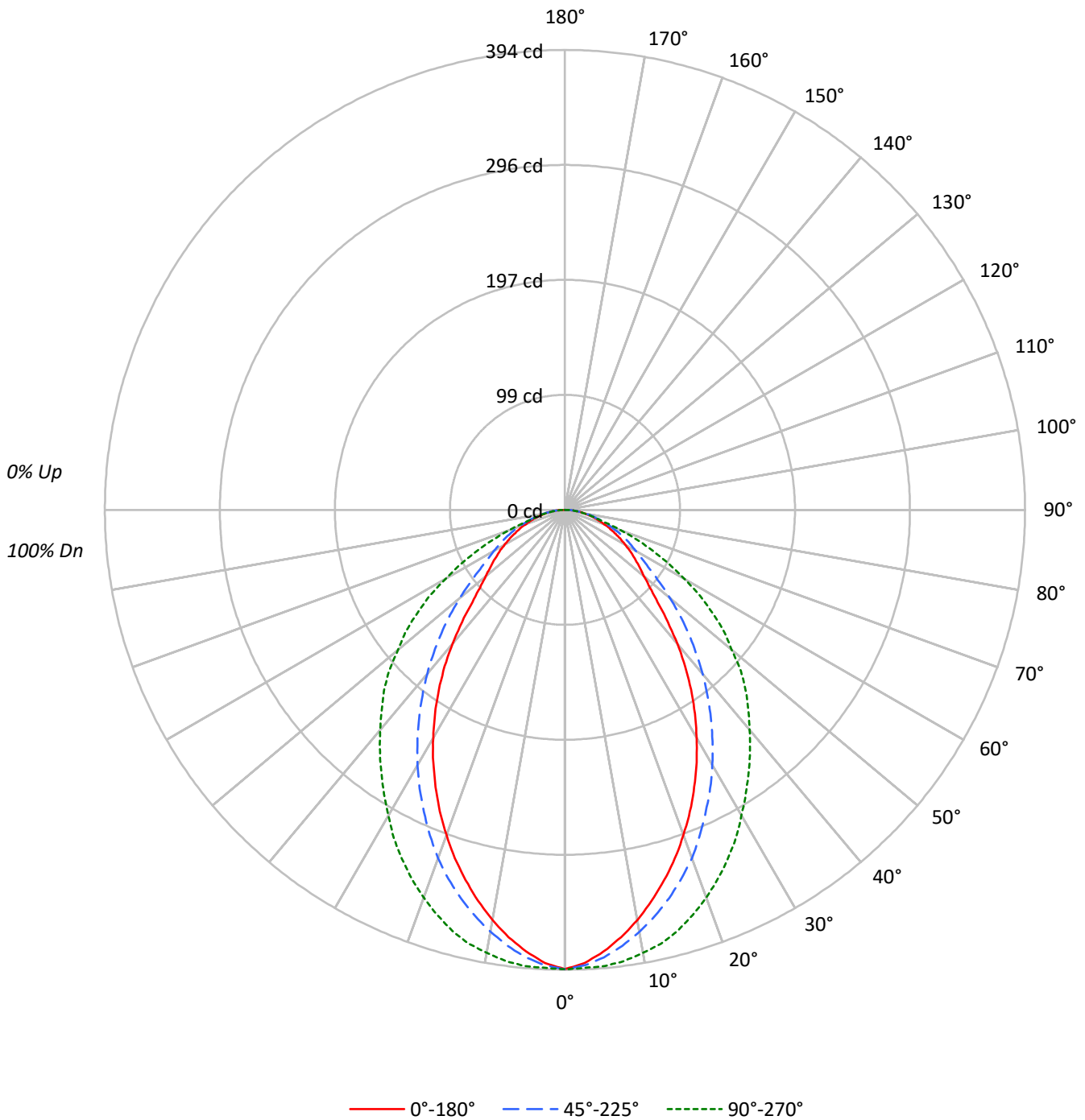
Lumens per Lamp: N/A
Luminaire Lumens: 716.3 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1060811

CATALOG NUMBER: S124RDR-H350D840-X4F0-XX-UDD-WVL-S

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3388	3388	3388
5°	3284	3326	3391
10°	3120	3210	3368
15°	2927	3070	3328
20°	2718	2910	3239
25°	2488	2712	3135
30°	2243	2510	3006
35°	1977	2290	2884
40°	1683	2063	2768
45°	1366	1823	2667
50°	1183	1569	2497
55°	1096	1332	2317
60°	1023	1200	2032
65°	958	1127	1689
70°	894	1037	1276
75°	852	962	918
80°	798	878	779
85°	731	810	613

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2667 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.3	5.1
10°-20°	97.6	13.6
20°-30°	133.3	18.6
30°-40°	139.7	19.5
40°-50°	120.9	16.9
50°-60°	90.9	12.7
60°-70°	58.6	8.2
70°-80°	30.0	4.2
80°-90°	9.0	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°	267.3	37.3
0°-40°	407.0	56.8
0°-60°	618.8	86.4
0°-90°	716.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	716.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	380	386	385	388	392	36
15°	328	337	344	360	373	92
25°	262	272	285	308	330	120
35°	188	199	218	247	274	117
45°	112	124	150	186	219	88
55°	73	76	89	127	154	66
65°	47	48	55	67	83	47
75°	26	28	29	28	28	27
85°	7	9	8	8	6	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	393.5	393.5	393.5	393.5	393.5
2.5°	388.5	393.5	390.6	391.4	392.7
5°	379.9	385.7	384.8	387.7	392.3
7.5°	369.2	375.3	376.6	383.2	389.8
10°	356.8	363.8	367.1	377.0	385.2
12.5°	343.2	350.6	356.4	368.7	380.7
15°	328.3	336.6	344.4	360.1	373.3
17.5°	313.1	321.3	331.6	348.9	363.8
20°	296.6	305.6	317.6	335.7	353.5
22.5°	279.7	289.1	301.9	321.7	342.3
25°	261.9	271.8	285.4	307.7	330.0
27.5°	244.2	254.1	269.3	292.9	317.2
30°	225.6	235.9	252.4	278.0	302.3
32.5°	207.1	218.2	235.1	262.3	288.3
35°	188.1	198.8	217.8	246.7	274.3
37.5°	169.1	180.2	200.5	231.4	260.3
40°	149.7	161.3	183.5	216.1	246.2
42.5°	130.3	142.7	166.2	200.5	232.2
45°	112.2	123.7	149.7	186.4	219.0
47.5°	98.6	106.4	133.2	172.8	204.2
50°	88.3	92.4	117.1	158.0	186.4
52.5°	80.4	83.3	102.3	141.9	172.0
55°	73.0	75.5	88.7	126.6	154.3
57.5°	66.4	67.6	78.4	111.8	137.4
60°	59.4	60.6	69.7	95.7	118.0
62.5°	53.2	54.0	62.7	80.4	100.2
65°	47.0	47.8	55.3	66.8	82.9
67.5°	41.2	42.5	48.3	54.4	66.0
70°	35.5	37.9	41.2	44.1	50.7
72.5°	30.5	33.0	34.6	35.5	35.9
75°	25.6	28.5	28.9	28.5	27.6
77.5°	20.6	23.1	23.1	22.3	21.4
80°	16.1	18.1	17.7	16.9	15.7
82.5°	12.0	13.2	12.8	12.0	10.7
85°	7.4	8.7	8.2	7.8	6.2
87.5°	3.7	4.9	4.5	4.1	2.5
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	10.67	12.15	11.03	12.47	12.78	14.45	15.93	14.81	16.24	16.56
	3H	12.32	13.65	12.70	13.98	14.34	15.56	16.89	15.94	17.22	17.58
	4H	13.00	14.24	13.40	14.59	14.97	15.85	17.10	16.25	17.44	17.82
	6H	13.51	14.66	13.92	15.03	15.42	16.05	17.20	16.46	17.56	17.96
	8H	13.69	14.79	14.12	15.18	15.58	16.10	17.19	16.53	17.58	17.99
	12H	13.82	14.86	14.25	15.25	15.68	16.13	17.17	16.56	17.56	17.99
4H	2H	11.45	12.70	11.85	13.05	13.43	14.61	15.85	15.01	16.20	16.58
	3H	13.31	14.35	13.73	14.75	15.15	15.92	16.95	16.33	17.35	17.75
	4H	14.13	15.05	14.56	15.47	15.91	16.33	17.25	16.76	17.67	18.11
	6H	14.77	15.58	15.23	16.02	16.48	16.64	17.45	17.10	17.89	18.35
	8H	15.00	15.76	15.47	16.20	16.67	16.73	17.49	17.20	17.93	18.40
	12H	15.17	15.84	15.65	16.32	16.79	16.80	17.47	17.28	17.95	18.42
8H	4H	14.47	15.23	14.94	15.67	16.14	16.46	17.21	16.92	17.66	18.13
	6H	15.27	15.89	15.76	16.38	16.86	16.87	17.49	17.37	17.98	18.46
	8H	15.59	16.15	16.10	16.66	17.15	17.02	17.58	17.54	18.09	18.58
	12H	15.85	16.35	16.36	16.84	17.41	17.14	17.64	17.66	18.13	18.70
12H	4H	14.50	15.18	14.99	15.66	16.13	16.46	17.14	16.95	17.61	18.09
	6H	15.33	15.89	15.84	16.40	16.89	16.89	17.45	17.41	17.96	18.45
	8H	15.72	16.21	16.23	16.70	17.27	17.09	17.59	17.60	18.08	18.65