

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: P1060807

Luminaire Tested: S124RDR-H350D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D840-X4F0-XX-UDD-SVL-B
Description: DEFINE 4 BLACK 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

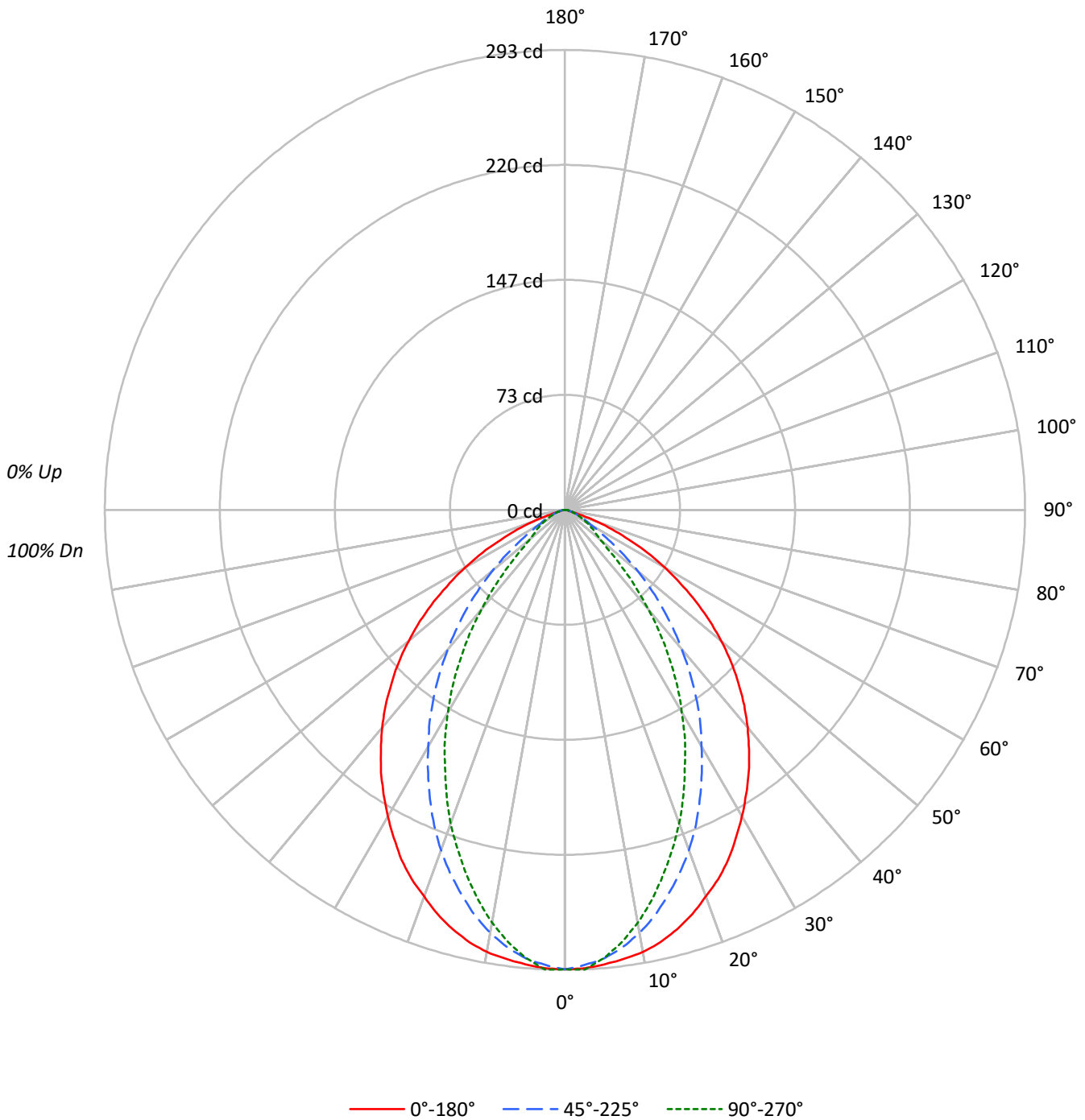
Lumens per Lamp: N/A
Luminaire Lumens: 431.5 lumens
Efficiency: N/A
Efficacy: 36.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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					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	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63				
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57				
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51				
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43				
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39				
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2520	2520	2520
5°	2512	2480	2477
10°	2502	2393	2336
15°	2466	2263	2150
20°	2403	2115	1949
25°	2338	1931	1716
30°	2242	1730	1480
35°	2146	1530	1222
40°	2035	1302	926
45°	1902	1064	622
50°	1740	806	387
55°	1528	533	327
60°	1264	327	270
65°	915	253	218
70°	499	186	166
75°	110	136	150
80°	79	104	124
85°	79	79	119

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1902 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.1	6.3
10°-20°	72.0	16.7
20°-30°	95.4	22.1
30°-40°	94.7	21.9
40°-50°	72.9	16.9
50°-60°	43.4	10.1
60°-70°	19.7	4.6
70°-80°	5.1	1.2
80°-90°	1.1	0.3
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°	194.5	45.1
0°-40°	289.2	67.0
0°-60°	405.6	94.0
0°-90°	431.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	431.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	293	293	293	293	293	
5°	291	291	287	287	286	28
15°	277	270	254	245	241	78
25°	246	228	203	186	181	113
35°	204	178	146	123	116	127
45°	156	126	87	61	51	120
55°	102	73	36	22	22	91
65°	45	27	12	11	11	45
75°	3	4	4	4	4	7
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	292.7	292.7	292.7	292.7	292.7
2.5°	292.3	292.7	290.2	292.3	293.1
5°	290.6	291.0	286.9	286.9	286.5
7.5°	288.6	287.7	281.1	278.7	277.8
10°	286.1	283.2	273.7	268.8	267.1
12.5°	282.0	277.4	264.7	257.6	254.8
15°	276.6	269.6	253.9	245.3	241.2
17.5°	270.0	261.4	242.8	231.7	227.1
20°	262.2	250.6	230.8	216.8	212.7
22.5°	254.8	240.3	217.7	201.6	197.0
25°	246.1	228.4	203.2	186.3	180.6
27.5°	235.8	216.8	188.8	171.5	165.7
30°	225.5	204.5	174.0	155.8	148.8
32.5°	214.8	191.7	160.4	139.7	133.2
35°	204.1	178.5	145.5	123.3	116.2
37.5°	192.5	165.3	130.7	107.6	99.8
40°	181.0	152.5	115.8	92.3	82.4
42.5°	169.0	139.3	101.4	76.7	66.8
45°	156.2	125.7	87.4	61.0	51.1
47.5°	143.5	113.0	73.4	45.8	36.7
50°	129.9	99.3	60.2	33.4	28.9
52.5°	116.2	86.2	47.0	26.0	24.7
55°	101.8	72.6	35.5	22.3	21.8
57.5°	87.0	60.2	25.6	19.4	18.6
60°	73.4	48.6	19.0	16.5	15.7
62.5°	59.4	36.7	15.7	13.6	12.8
65°	44.9	26.8	12.4	10.7	10.7
67.5°	32.6	18.1	9.9	8.7	8.2
70°	19.8	11.1	7.4	7.0	6.6
72.5°	9.9	6.6	5.8	5.4	5.4
75°	3.3	4.1	4.1	4.5	4.5
77.5°	2.5	2.9	2.9	3.3	3.3
80°	1.6	2.1	2.1	2.5	2.5
82.5°	1.2	1.2	1.6	1.6	2.1
85°	0.8	0.8	0.8	1.2	1.2
87.5°	0.4	0.4	0.4	0.8	0.8
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	12.33	13.67	12.70	13.98	14.29	3.89	5.22	4.26	5.54	5.85
	3H	12.84	14.02	13.22	14.35	14.72	4.70	5.88	5.08	6.21	6.58
	4H	12.81	13.90	13.21	14.26	14.64	4.98	6.08	5.39	6.43	6.82
	6H	12.74	13.75	13.16	14.12	14.51	5.16	6.17	5.57	6.54	6.93
	8H	12.70	13.66	13.13	14.05	14.45	5.22	6.18	5.66	6.57	6.97
	12H	12.66	13.58	13.10	13.96	14.39	5.27	6.18	5.70	6.56	6.99
4H	2H	12.17	13.27	12.58	13.62	14.01	4.33	5.43	4.74	5.78	6.16
	3H	12.73	13.62	13.14	14.03	14.43	5.29	6.19	5.71	6.59	7.00
	4H	12.70	13.49	13.13	13.91	14.35	5.65	6.45	6.09	6.87	7.31
	6H	12.64	13.33	13.11	13.78	14.24	5.91	6.59	6.37	7.04	7.51
	8H	12.60	13.24	13.07	13.68	14.15	6.00	6.64	6.47	7.08	7.56
	12H	12.56	13.12	13.04	13.61	14.08	6.07	6.63	6.56	7.12	7.59
8H	4H	12.59	13.23	13.06	13.67	14.14	5.74	6.38	6.21	6.83	7.30
	6H	12.52	13.05	13.03	13.54	14.02	6.06	6.58	6.56	7.07	7.56
	8H	12.48	12.95	13.00	13.46	13.95	6.19	6.65	6.71	7.17	7.66
	12H	12.44	12.86	12.96	13.35	13.92	6.32	6.73	6.83	7.22	7.80
12H	4H	12.54	13.11	13.03	13.59	14.06	5.72	6.28	6.20	6.76	7.24
	6H	12.47	12.94	12.99	13.45	13.95	6.04	6.50	6.56	7.02	7.51
	8H	12.44	12.86	12.96	13.35	13.92	6.20	6.62	6.72	7.11	7.68