

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: P1060792

Luminaire Tested: S124RDR-H350D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060792
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D830-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

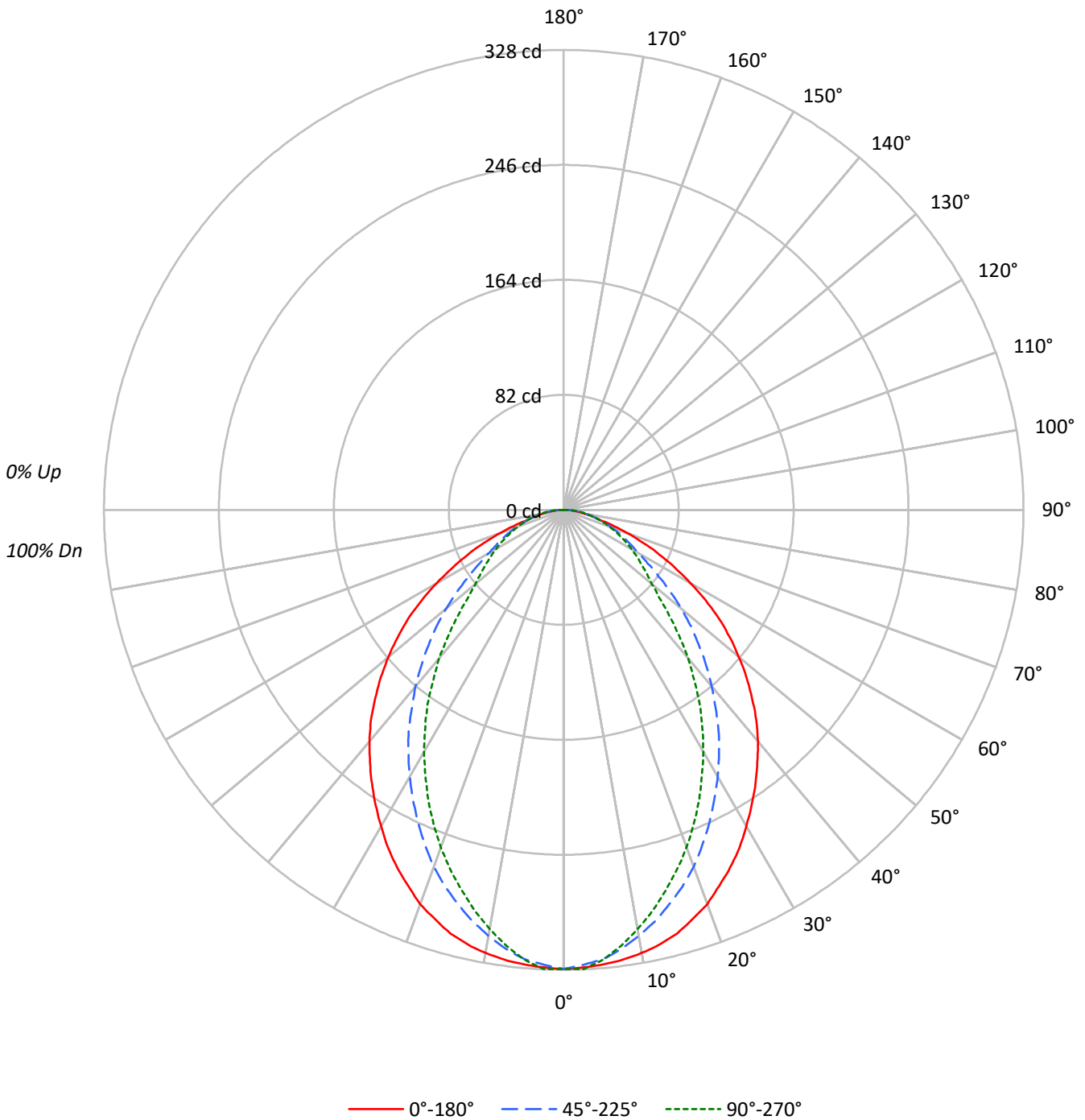
Lumens per Lamp: N/A
Luminaire Lumens: 631.3 lumens
Efficiency: N/A
Efficacy: 54.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86				
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74				
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64				
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33				
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2819	2819	2819
5°	2814	2781	2783
10°	2806	2698	2655
15°	2789	2597	2504
20°	2743	2482	2348
25°	2673	2336	2171
30°	2590	2185	1982
35°	2507	2027	1780
40°	2422	1847	1552
45°	2315	1659	1298
50°	2185	1464	1099
55°	2033	1242	1016
60°	1803	1054	961
65°	1536	972	909
70°	1201	901	861
75°	818	832	832
80°	704	784	803
85°	613	761	840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2315 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.5	4.8
10°-20°	82.7	13.1
20°-30°	114.9	18.2
30°-40°	123.1	19.5
40°-50°	109.1	17.3
50°-60°	82.2	13.0
60°-70°	53.2	8.4
70°-80°	27.3	4.3
80°-90°	8.4	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°	228.0	36.1
0°-40°	351.2	55.6
0°-60°	542.4	85.9
0°-90°	631.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	631.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	327	327	327	327	327	
5°	326	326	322	322	322	31
15°	313	306	291	284	281	88
25°	281	266	246	233	228	129
35°	238	217	193	175	169	149
45°	190	165	136	115	107	147
55°	135	113	83	70	68	120
65°	75	61	48	45	45	75
75°	25	26	25	25	25	29
85°	6	6	8	8	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	327.4	327.4	327.4	327.4	327.4
2.5°	326.7	327.8	324.7	327.0	327.8
5°	325.5	325.9	321.7	322.0	322.0
7.5°	323.6	322.8	315.9	314.0	313.6
10°	320.9	318.6	308.6	304.7	303.6
12.5°	317.4	313.2	300.5	295.1	292.8
15°	312.8	305.9	291.3	283.9	280.9
17.5°	305.9	297.0	281.6	272.4	268.9
20°	299.3	287.4	270.9	259.3	256.2
22.5°	290.1	277.4	258.6	246.2	242.4
25°	281.3	266.2	245.9	232.8	228.5
27.5°	271.6	254.7	232.8	218.9	213.5
30°	260.5	242.4	219.7	205.1	199.3
32.5°	249.7	230.5	206.2	190.1	183.9
35°	238.5	217.0	192.8	175.4	169.3
37.5°	227.0	204.3	177.8	160.8	152.7
40°	215.5	191.6	164.3	145.1	138.1
42.5°	203.5	178.5	150.4	130.4	121.6
45°	190.1	165.4	136.2	115.0	106.6
47.5°	177.0	152.7	123.1	100.0	92.3
50°	163.1	139.3	109.3	87.0	82.0
52.5°	149.3	125.4	95.8	77.0	74.6
55°	135.4	112.7	82.7	69.6	67.7
57.5°	120.0	99.7	71.2	63.1	61.6
60°	104.7	85.4	61.2	56.9	55.8
62.5°	89.6	73.1	54.3	50.8	50.0
65°	75.4	60.8	47.7	45.0	44.6
67.5°	61.6	50.0	41.6	40.0	39.2
70°	47.7	40.0	35.8	35.0	34.2
72.5°	35.4	32.3	30.4	30.0	29.6
75°	24.6	25.8	25.0	25.0	25.0
77.5°	19.6	20.0	20.4	20.8	20.4
80°	14.2	15.4	15.8	16.5	16.2
82.5°	10.0	10.8	11.9	12.3	12.7
85°	6.2	6.5	7.7	8.5	8.5
87.5°	2.7	3.1	3.8	4.6	5.0
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	14.04	15.54	14.41	15.85	16.17	10.61	12.10	10.97	12.42	12.73
	3H	15.25	16.59	15.63	16.92	17.28	12.30	13.64	12.68	13.97	14.33
	4H	15.55	16.81	15.95	17.16	17.54	12.98	14.24	13.38	14.59	14.96
	6H	15.76	16.92	16.17	17.29	17.68	13.53	14.69	13.94	15.06	15.45
	8H	15.81	16.92	16.24	17.31	17.71	13.74	14.85	14.17	15.24	15.64
	12H	15.85	16.91	16.28	17.29	17.72	13.92	14.98	14.35	15.36	15.79
4H	2H	14.18	15.44	14.58	15.79	16.17	11.27	12.52	11.67	12.87	13.25
	3H	15.59	16.63	16.00	17.03	17.43	13.17	14.22	13.58	14.62	15.02
	4H	16.01	16.95	16.44	17.37	17.81	13.98	14.92	14.41	15.33	15.77
	6H	16.34	17.15	16.79	17.60	18.06	14.66	15.48	15.12	15.92	16.39
	8H	16.43	17.20	16.90	17.64	18.11	14.94	15.70	15.40	16.15	16.61
	12H	16.50	17.19	16.99	17.67	18.14	15.17	15.85	15.65	16.33	16.80
8H	4H	16.14	16.90	16.60	17.35	17.82	14.29	15.06	14.76	15.50	15.97
	6H	16.56	17.19	17.06	17.68	18.16	15.12	15.75	15.62	16.24	16.72
	8H	16.72	17.28	17.23	17.79	18.28	15.49	16.05	16.00	16.56	17.05
	12H	16.85	17.35	17.36	17.84	18.41	15.82	16.32	16.33	16.82	17.38
12H	4H	16.14	16.83	16.63	17.31	17.78	14.32	15.00	14.80	15.48	15.95
	6H	16.58	17.15	17.10	17.66	18.15	15.18	15.75	15.70	16.26	16.75
	8H	16.79	17.30	17.30	17.79	18.35	15.61	16.11	16.12	16.61	17.17