

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: P1060810

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060810
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-H350D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

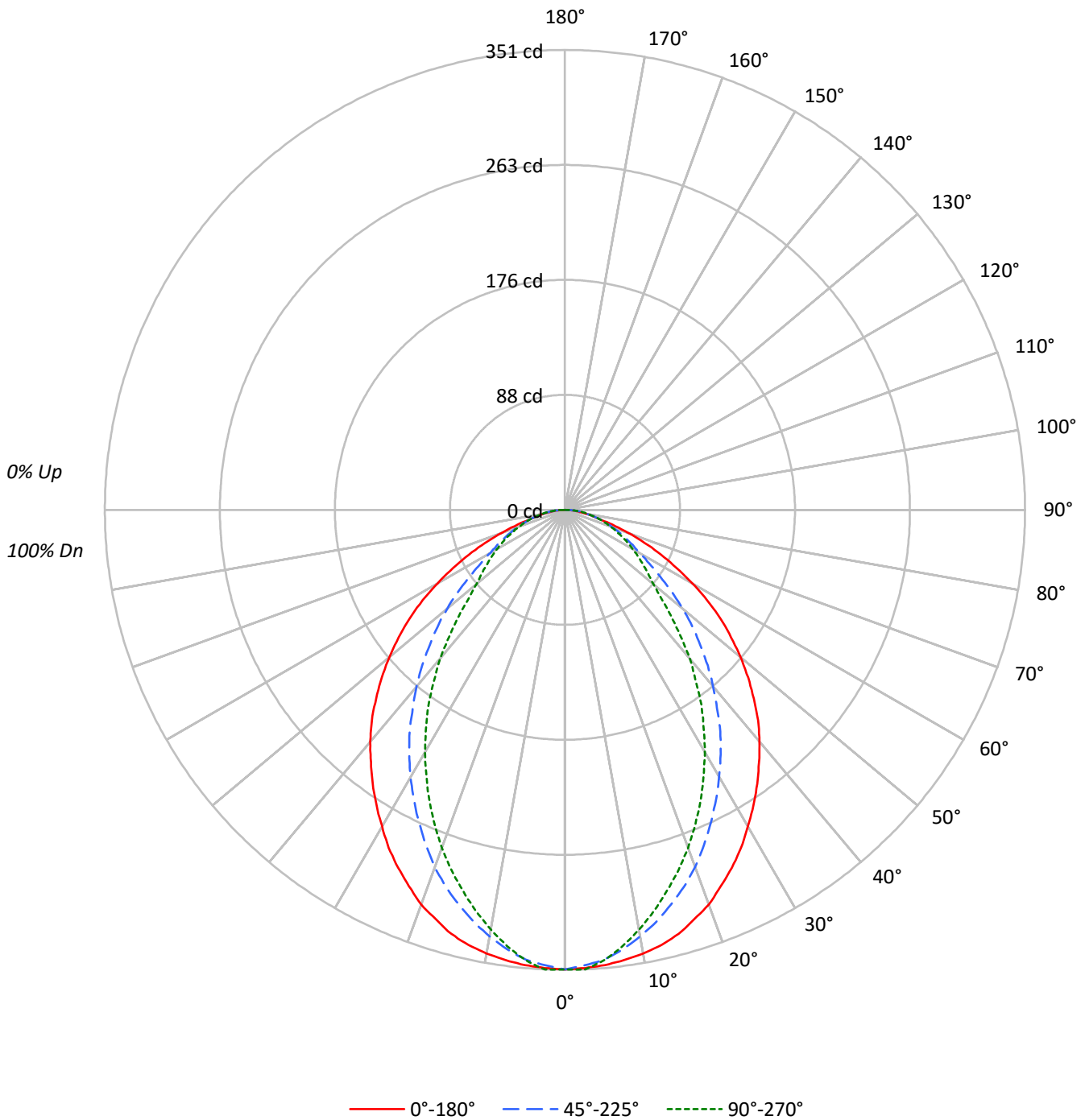
Lumens per Lamp: N/A
Luminaire Lumens: 676.4 lumens
Efficiency: N/A
Efficacy: 57.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	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°	3021	3021	3021
5°	3015	2979	2982
10°	3006	2891	2844
15°	2987	2782	2682
20°	2939	2659	2515
25°	2863	2503	2327
30°	2775	2341	2123
35°	2687	2171	1907
40°	2596	1978	1664
45°	2479	1777	1391
50°	2342	1569	1176
55°	2178	1330	1090
60°	1931	1128	1030
65°	1646	1041	974
70°	1287	964	924
75°	878	892	892
80°	759	838	858
85°	652	810	899

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2479 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	4.8
10°-20°	88.6	13.1
20°-30°	123.1	18.2
30°-40°	131.9	19.5
40°-50°	116.9	17.3
50°-60°	88.1	13.0
60°-70°	57.0	8.4
70°-80°	29.3	4.3
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°	244.3	36.1
0°-40°	376.2	55.6
0°-60°	581.2	85.9
0°-90°	676.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	676.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	351	351	351	351	351	
5°	349	349	345	345	345	33
15°	335	328	312	304	301	94
25°	301	285	263	249	245	139
35°	256	232	206	188	181	160
45°	204	177	146	123	114	157
55°	145	121	89	75	73	129
65°	81	65	51	48	48	80
75°	26	28	27	27	27	31
85°	7	7	8	9	9	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	350.8	350.8	350.8	350.8	350.8
2.5°	350.0	351.2	347.9	350.4	351.2
5°	348.8	349.2	344.6	345.0	345.0
7.5°	346.7	345.9	338.4	336.4	336.0
10°	343.8	341.3	330.6	326.5	325.3
12.5°	340.1	335.6	322.0	316.2	313.7
15°	335.1	327.7	312.1	304.2	300.9
17.5°	327.7	318.2	301.8	291.9	288.2
20°	320.7	307.9	290.2	277.8	274.5
22.5°	310.8	297.2	277.0	263.8	259.7
25°	301.3	285.3	263.4	249.4	244.9
27.5°	291.0	272.9	249.4	234.6	228.8
30°	279.1	259.7	235.4	219.7	213.5
32.5°	267.5	246.9	221.0	203.6	197.0
35°	255.6	232.5	206.5	188.0	181.4
37.5°	243.2	218.9	190.5	172.3	163.7
40°	230.9	205.3	176.0	155.4	148.0
42.5°	218.1	191.3	161.2	139.7	130.3
45°	203.6	177.3	145.9	123.3	114.2
47.5°	189.6	163.7	131.9	107.2	98.9
50°	174.8	149.2	117.1	93.2	87.8
52.5°	159.9	134.4	102.6	82.4	80.0
55°	145.1	120.8	88.6	74.6	72.6
57.5°	128.6	106.8	76.3	67.6	66.0
60°	112.1	91.5	65.5	61.0	59.8
62.5°	96.1	78.3	58.1	54.4	53.6
65°	80.8	65.1	51.1	48.2	47.8
67.5°	66.0	53.6	44.5	42.9	42.0
70°	51.1	42.9	38.3	37.5	36.7
72.5°	37.9	34.6	32.6	32.2	31.7
75°	26.4	27.6	26.8	26.8	26.8
77.5°	21.0	21.4	21.8	22.3	21.8
80°	15.3	16.5	16.9	17.7	17.3
82.5°	10.7	11.5	12.8	13.2	13.6
85°	6.6	7.0	8.2	9.1	9.1
87.5°	2.9	3.3	4.1	4.9	5.4
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	14.28	15.78	14.65	16.09	16.41	10.85	12.34	11.21	12.66	12.97
	3H	15.49	16.83	15.87	17.16	17.52	12.54	13.88	12.92	14.21	14.57
	4H	15.79	17.05	16.19	17.40	17.78	13.22	14.48	13.62	14.83	15.21
	6H	16.00	17.16	16.41	17.53	17.92	13.77	14.93	14.18	15.30	15.69
	8H	16.05	17.16	16.48	17.55	17.95	13.98	15.09	14.41	15.48	15.88
	12H	16.09	17.15	16.52	17.53	17.96	14.16	15.22	14.59	15.60	16.03
4H	2H	14.42	15.68	14.82	16.03	16.41	11.50	12.76	11.90	13.11	13.49
	3H	15.83	16.87	16.24	17.27	17.67	13.41	14.46	13.83	14.86	15.26
	4H	16.25	17.19	16.68	17.61	18.05	14.22	15.16	14.65	15.57	16.01
	6H	16.58	17.39	17.03	17.84	18.30	14.90	15.72	15.36	16.16	16.62
	8H	16.67	17.44	17.14	17.88	18.35	15.18	15.94	15.64	16.39	16.85
	12H	16.74	17.43	17.23	17.90	18.38	15.41	16.09	15.89	16.57	17.04
8H	4H	16.38	17.14	16.84	17.59	18.05	14.53	15.30	15.00	15.74	16.21
	6H	16.80	17.43	17.30	17.92	18.40	15.36	15.99	15.86	16.48	16.96
	8H	16.96	17.52	17.47	18.03	18.52	15.73	16.29	16.24	16.80	17.29
	12H	17.08	17.59	17.59	18.08	18.64	16.06	16.56	16.57	17.06	17.62
12H	4H	16.38	17.07	16.87	17.55	18.02	14.56	15.24	15.04	15.72	16.19
	6H	16.82	17.39	17.34	17.90	18.39	15.42	15.99	15.94	16.50	16.99
	8H	17.03	17.53	17.54	18.03	18.59	15.85	16.35	16.36	16.85	17.41