

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: P1060815

Luminaire Tested: S124RDR-H350D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060815
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

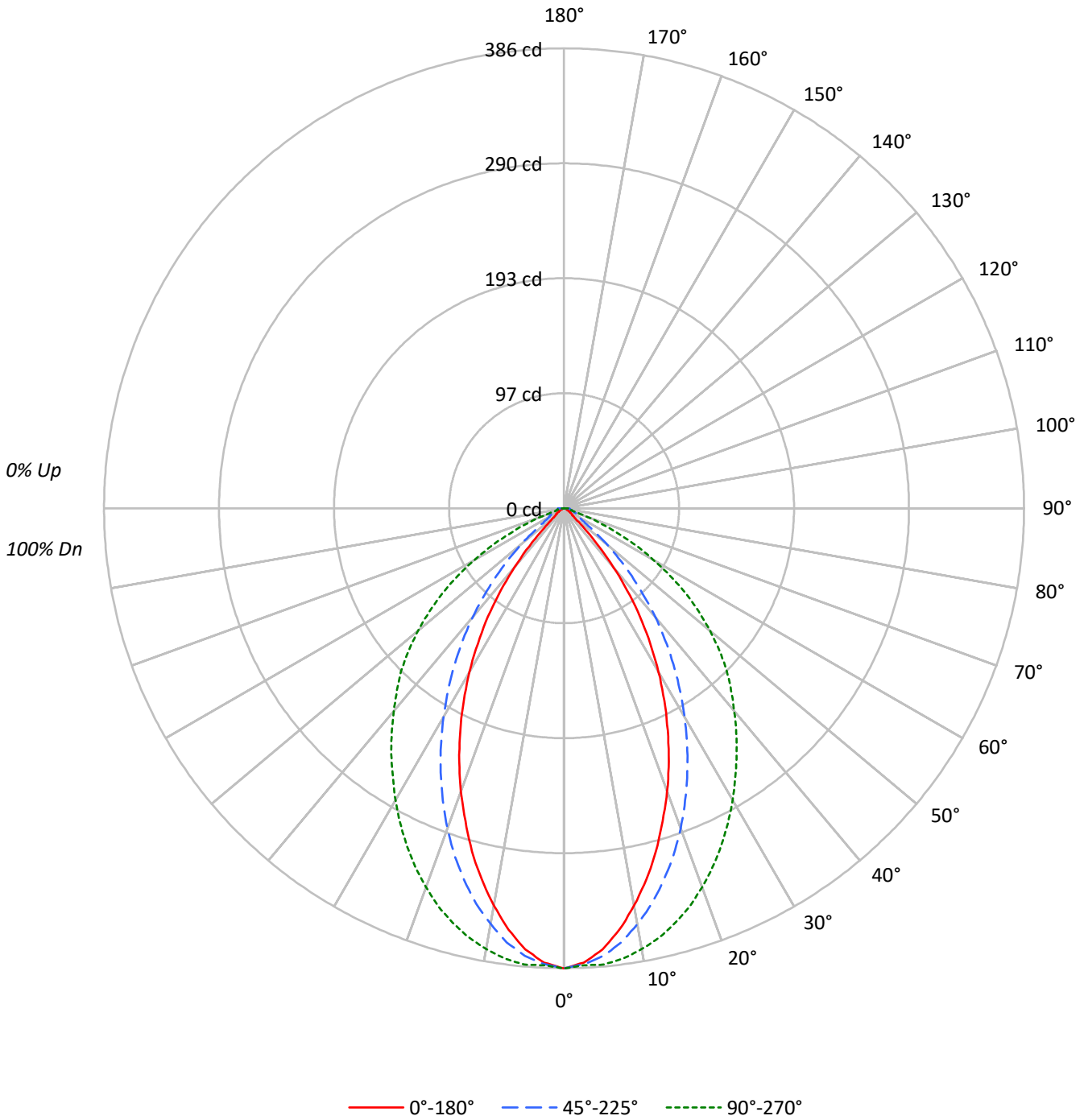
Lumens per Lamp: N/A
Luminaire Lumens: 486.8 lumens
Efficiency: N/A
Efficacy: 41.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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			100	
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90	
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81			81	
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72			72	
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65			65	
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59			59	
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54			54	
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49			49	
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45			45	
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42			42	
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39			39	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3326	3326	3326
5°	3213	3260	3323
10°	2961	3100	3286
15°	2659	2881	3213
20°	2318	2621	3103
25°	1955	2326	2967
30°	1578	2011	2813
35°	1168	1682	2654
40°	724	1340	2497
45°	287	977	2352
50°	127	614	2138
55°	102	320	1872
60°	71	243	1491
65°	47	240	1025
70°	45	217	478
75°	60	210	210
80°	89	248	248
85°	178	494	356

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2352 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	7.3
10°-20°	91.4	18.8
20°-30°	115.4	23.7
30°-40°	105.9	21.8
40°-50°	72.1	14.8
50°-60°	39.3	8.1
60°-70°	17.0	3.5
70°-80°	6.2	1.3
80°-90°	4.0	0.8
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°	242.3	49.8
0°-40°	348.2	71.5
0°-60°	459.6	94.4
0°-90°	486.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	486.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	386	386	386	386	386	
5°	372	377	377	381	384	34
15°	298	309	323	346	360	83
25°	206	220	245	284	312	94
35°	111	127	160	211	252	69
45°	24	39	80	142	193	22
55°	7	7	21	78	125	6
65°	2	3	12	24	50	3
75°	2	6	6	6	6	2
85°	2	4	5	5	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	386.2	386.2	386.2	386.2	386.2
2.5°	381.7	386.2	383.0	383.9	383.9
5°	371.7	376.7	377.1	381.2	384.4
7.5°	356.7	364.0	367.6	375.8	381.2
10°	338.6	347.2	354.5	368.5	375.8
12.5°	319.1	329.1	340.0	358.6	369.0
15°	298.3	308.7	323.2	346.3	360.4
17.5°	275.1	287.8	305.5	333.2	350.4
20°	252.9	265.6	286.0	317.3	338.6
22.5°	229.8	243.0	265.6	300.5	325.9
25°	205.8	220.3	244.8	283.8	312.3
27.5°	182.2	197.6	223.5	266.1	297.8
30°	158.7	174.1	202.2	248.0	282.9
32.5°	134.6	150.5	180.9	228.9	267.4
35°	111.1	127.4	160.0	210.8	252.5
37.5°	87.0	104.3	139.2	193.1	237.5
40°	64.4	81.6	119.2	175.4	222.1
42.5°	43.1	60.3	98.8	158.2	207.6
45°	23.6	39.4	80.2	142.3	193.1
47.5°	12.7	21.8	62.1	126.9	176.8
50°	9.5	11.8	45.8	110.6	159.6
52.5°	8.2	9.1	31.7	93.4	142.3
55°	6.8	7.3	21.3	78.4	124.7
57.5°	5.4	5.9	15.9	63.5	105.6
60°	4.1	5.0	14.1	49.0	86.6
62.5°	3.2	4.1	13.1	35.8	68.4
65°	2.3	3.2	11.8	24.5	50.3
67.5°	2.3	3.6	10.0	15.9	34.0
70°	1.8	5.0	8.6	10.4	19.0
72.5°	1.8	5.4	7.3	7.3	7.3
75°	1.8	5.9	6.3	6.3	6.3
77.5°	1.8	5.4	5.9	5.4	5.4
80°	1.8	5.0	5.0	5.0	5.0
82.5°	1.8	4.5	5.0	5.0	4.1
85°	1.8	4.1	5.0	5.0	3.6
87.5°	1.4	4.1	4.5	4.5	2.7
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	0.00	0.00	0.00	0.00	0.00	12.59	13.87	12.95	14.18	14.49
	3H	0.00	0.00	0.00	0.00	0.00	12.96	14.09	13.34	14.42	14.79
	4H	0.00	0.00	0.00	0.00	0.00	12.94	13.99	13.34	14.34	14.73
	6H	0.00	0.00	0.00	0.36	0.76	12.93	13.89	13.34	14.26	14.66
	8H	0.00	0.53	0.04	0.92	1.32	12.93	13.84	13.36	14.23	14.64
	12H	0.28	1.15	0.71	1.54	1.97	12.94	13.81	13.37	14.20	14.63
4H	2H	0.00	0.00	0.00	0.24	0.62	12.40	13.45	12.80	13.80	14.18
	3H	0.42	1.27	0.83	1.68	2.08	12.82	13.68	13.23	14.08	14.48
	4H	1.71	2.47	2.14	2.89	3.34	12.81	13.58	13.25	14.00	14.45
	6H	2.83	3.49	3.29	3.94	4.40	12.85	13.52	13.32	13.96	14.43
	8H	3.33	3.95	3.80	4.40	4.87	12.88	13.50	13.35	13.95	14.42
	12H	3.88	4.43	4.37	4.91	5.38	12.95	13.49	13.43	13.98	14.45
8H	4H	2.79	3.41	3.26	3.85	4.32	12.72	13.34	13.19	13.79	14.26
	6H	4.33	4.83	4.83	5.33	5.81	12.80	13.31	13.31	13.80	14.29
	8H	5.13	5.58	5.65	6.10	6.59	12.89	13.34	13.41	13.86	14.35
	12H	5.96	6.37	6.48	6.86	7.43	13.06	13.46	13.57	13.95	14.53
12H	4H	2.98	3.52	3.46	4.01	4.48	12.69	13.23	13.17	13.72	14.19
	6H	4.69	5.14	5.21	5.66	6.15	12.78	13.23	13.30	13.75	14.24
	8H	5.69	6.09	6.21	6.59	7.16	12.91	13.32	13.43	13.81	14.38