

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: P1059678

Luminaire Tested: S123RDR-H560D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059678
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE 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

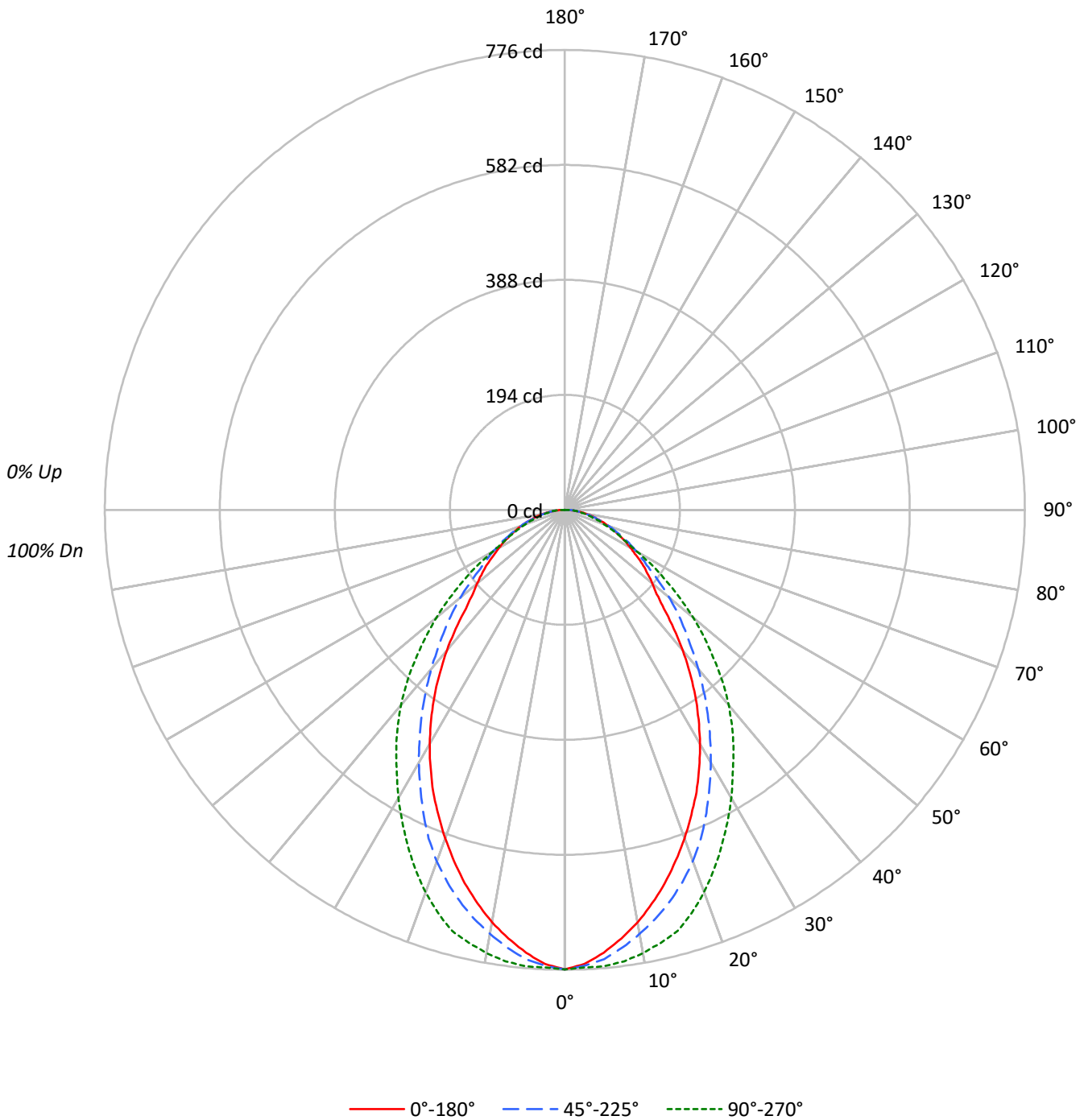
Lumens per Lamp: N/A
Luminaire Lumens: 1362.6 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9106	9106	9106
5°	8842	8968	9109
10°	8426	8665	9055
15°	7926	8315	8940
20°	7371	7889	8581
25°	6805	7315	8111
30°	6180	6678	7609
35°	5500	6026	7107
40°	4746	5371	6588
45°	3922	4754	5907
50°	3524	4194	5157
55°	3265	3579	4277
60°	3008	3260	3276
65°	2801	2948	2745
70°	2633	2681	2407
75°	2482	2391	2119
80°	2346	2164	1988
85°	2250	2425	2250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5907 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	5.3
10°-20°	193.5	14.2
20°-30°	261.8	19.2
30°-40°	269.0	19.7
40°-50°	225.9	16.6
50°-60°	162.0	11.9
60°-70°	103.1	7.6
70°-80°	56.7	4.2
80°-90°	18.9	1.4
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°	527.1	38.7
0°-40°	796.1	58.4
0°-60°	1183.9	86.9
0°-90°	1362.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	750	763	761	766	773	70
15°	652	670	684	713	735	183
25°	525	545	565	595	626	241
35°	384	404	420	458	496	239
45°	236	257	286	328	356	187
55°	160	163	175	198	209	142
65°	101	107	106	100	99	100
75°	55	60	53	49	47	58
85°	17	17	18	19	17	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	775.5	775.5	775.5	775.5	775.5
2.5°	766.8	777.5	770.1	770.8	772.8
5°	750.1	763.4	760.8	766.1	772.8
7.5°	729.4	744.1	744.8	757.4	768.1
10°	706.7	722.1	726.7	746.1	759.4
12.5°	680.0	696.7	706.7	730.7	748.1
15°	652.0	670.0	684.0	713.4	735.4
17.5°	621.3	640.7	658.7	690.0	712.7
20°	589.9	610.6	631.3	660.7	686.7
22.5°	557.2	578.6	599.9	628.6	657.3
25°	525.2	545.2	564.6	595.3	626.0
27.5°	490.5	511.2	527.9	561.9	593.9
30°	455.8	476.5	492.5	527.9	561.2
32.5°	419.8	441.1	455.8	492.5	527.2
35°	383.7	404.4	420.4	457.8	495.8
37.5°	345.7	368.4	384.4	426.4	463.8
40°	309.6	331.0	350.4	394.4	429.8
42.5°	272.3	294.3	316.3	361.7	394.4
45°	236.2	256.9	286.3	327.7	355.7
47.5°	210.2	223.6	257.6	292.3	319.0
50°	192.9	198.2	229.6	260.3	282.3
52.5°	175.5	179.5	200.9	228.9	245.6
55°	159.5	162.8	174.8	198.2	208.9
57.5°	142.1	145.5	155.5	168.8	174.8
60°	128.1	130.8	138.8	140.8	139.5
62.5°	114.1	118.1	122.1	117.5	115.5
65°	100.8	106.8	106.1	100.1	98.8
67.5°	88.8	94.8	91.4	85.4	83.4
70°	76.7	82.8	78.1	72.1	70.1
72.5°	65.4	72.1	64.7	59.4	58.1
75°	54.7	60.1	52.7	48.7	46.7
77.5°	44.7	48.7	42.0	38.7	37.4
80°	34.7	37.4	32.0	30.0	29.4
82.5°	25.4	26.7	23.4	24.7	24.0
85°	16.7	17.4	18.0	18.7	16.7
87.5°	8.0	11.3	11.3	10.7	8.7
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	14.86	16.32	15.22	16.64	16.95	15.93	17.39	16.29	17.70	18.02
	3H	16.56	17.87	16.94	18.20	18.56	17.01	18.32	17.39	18.65	19.01
	4H	17.21	18.44	17.61	18.79	19.17	17.41	18.64	17.81	18.99	19.37
	6H	17.71	18.85	18.13	19.22	19.61	17.72	18.86	18.14	19.23	19.62
	8H	17.89	18.97	18.31	19.36	19.76	17.86	18.94	18.29	19.33	19.73
	12H	18.01	19.04	18.44	19.43	19.86	17.98	19.01	18.41	19.39	19.82
4H	2H	15.46	16.69	15.86	17.04	17.42	16.33	17.56	16.73	17.91	18.29
	3H	17.39	18.41	17.80	18.81	19.21	17.65	18.67	18.06	19.07	19.47
	4H	18.20	19.12	18.63	19.53	19.97	18.17	19.08	18.60	19.50	19.94
	6H	18.85	19.65	19.31	20.09	20.55	18.60	19.40	19.06	19.84	20.30
	8H	19.07	19.82	19.54	20.26	20.73	18.79	19.54	19.26	19.98	20.45
	12H	19.24	19.91	19.73	20.39	20.86	18.97	19.64	19.46	20.12	20.59
8H	4H	18.44	19.18	18.90	19.63	20.10	18.41	19.16	18.88	19.60	20.07
	6H	19.23	19.84	19.72	20.33	20.81	18.96	19.58	19.46	20.07	20.55
	8H	19.54	20.09	20.05	20.60	21.09	19.24	19.79	19.75	20.30	20.79
	12H	19.81	20.30	20.32	20.79	21.36	19.53	20.02	20.04	20.51	21.08
12H	4H	18.45	19.11	18.93	19.59	20.07	18.44	19.10	18.92	19.58	20.06
	6H	19.26	19.81	19.78	20.32	20.81	19.01	19.57	19.53	20.08	20.57
	8H	19.64	20.13	20.15	20.62	21.18	19.36	19.84	19.87	20.34	20.90