

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: P1059730

Luminaire Tested: S123RDR-H560D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D950-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

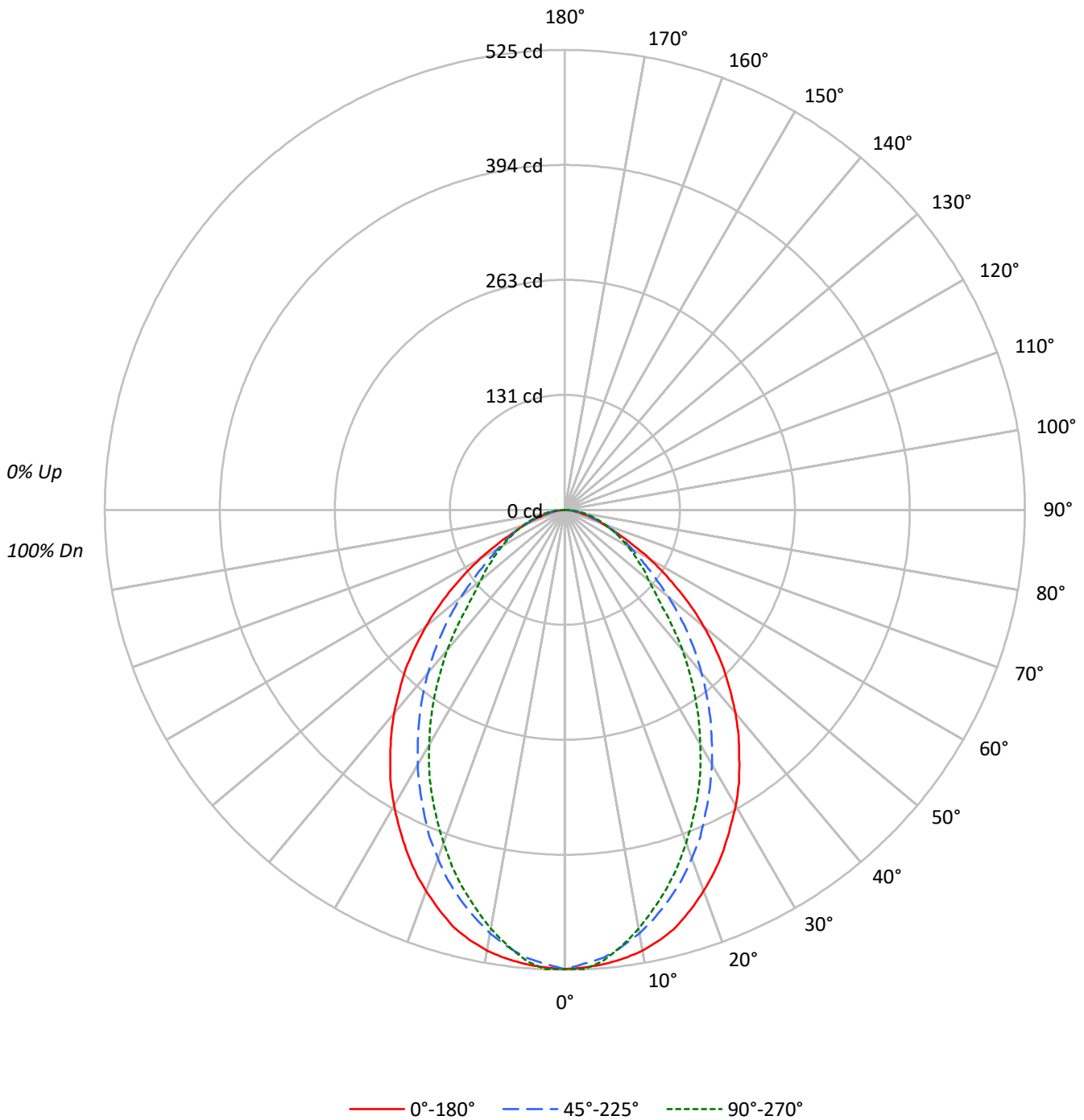
Lumens per Lamp: N/A
Luminaire Lumens: 916.8 lumens
Efficiency: N/A
Efficacy: 52.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6155	6155	6155
5°	6134	6045	6082
10°	6092	5852	5791
15°	5990	5598	5445
20°	5787	5291	5055
25°	5550	4930	4653
30°	5288	4553	4194
35°	4976	4146	3711
40°	4645	3719	3196
45°	4258	3285	2625
50°	3774	2821	2278
55°	3212	2360	2090
60°	2619	2057	1938
65°	1995	1820	1803
70°	1559	1624	1686
75°	1257	1456	1574
80°	940	1190	1447
85°	512	768	1280

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4258 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.7	5.3
10°-20°	130.9	14.3
20°-30°	178.0	19.4
30°-40°	184.5	20.1
40°-50°	155.6	17.0
50°-60°	110.5	12.0
60°-70°	67.5	7.4
70°-80°	33.6	3.7
80°-90°	7.6	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°	357.5	39.0
0°-40°	542.0	59.1
0°-60°	808.1	88.1
0°-90°	916.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	916.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	524	524	524	524	524	
5°	520	520	513	516	516	49
15°	493	483	460	452	448	138
25°	428	410	380	367	359	197
35°	347	321	289	269	259	217
45°	256	229	198	171	158	197
55°	157	140	115	105	102	141
65°	72	69	66	66	65	73
75°	28	30	32	33	35	30
85°	4	4	6	8	10	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	524.2	524.2	524.2	524.2	524.2
2.5°	522.9	523.5	518.5	524.2	524.8
5°	520.4	520.4	512.8	516.0	516.0
7.5°	516.6	515.3	502.7	502.7	501.5
10°	510.9	507.2	490.8	487.6	485.7
12.5°	502.7	496.4	476.3	470.6	466.8
15°	492.7	483.2	460.5	452.3	447.9
17.5°	478.2	468.7	443.5	432.2	427.1
20°	463.1	449.2	423.4	412.0	404.5
22.5°	446.7	429.0	403.8	390.0	381.8
25°	428.4	409.5	380.5	366.7	359.1
27.5°	408.9	388.1	358.5	342.7	335.2
30°	390.0	366.0	335.8	318.2	309.3
32.5°	369.8	342.7	311.9	293.6	284.8
35°	347.1	320.7	289.2	269.0	258.9
37.5°	325.7	298.6	265.9	244.4	233.1
40°	303.0	275.9	242.6	220.5	208.5
42.5°	279.1	253.3	220.5	194.7	183.3
45°	256.4	229.3	197.8	170.7	158.1
47.5°	231.8	206.6	175.8	148.1	139.2
50°	206.6	183.3	154.4	129.2	124.7
52.5°	182.1	162.5	132.9	116.6	114.7
55°	156.9	140.5	115.3	105.2	102.1
57.5°	133.6	121.6	98.9	93.9	92.6
60°	111.5	101.4	87.6	84.4	82.5
62.5°	90.1	84.4	76.2	75.0	73.7
65°	71.8	69.3	65.5	65.5	64.9
67.5°	56.7	56.7	56.1	57.3	56.7
70°	45.4	46.0	47.3	48.5	49.1
72.5°	35.9	37.8	39.1	41.0	41.6
75°	27.7	29.6	32.1	33.4	34.7
77.5°	20.2	22.1	24.6	26.5	27.7
80°	13.9	15.1	17.6	20.2	21.4
82.5°	8.8	9.5	11.3	13.9	15.1
85°	3.8	4.4	5.7	8.2	9.5
87.5°	0.0	0.0	0.6	2.5	4.4
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	15.12	16.57	15.49	16.89	17.20	13.22	14.67	13.59	14.98	15.30
	3H	16.02	17.32	16.40	17.64	18.01	14.79	16.09	15.17	16.42	16.78
	4H	16.30	17.52	16.70	17.86	18.24	15.39	16.60	15.79	16.95	17.33
	6H	16.45	17.57	16.87	17.94	18.33	15.84	16.96	16.25	17.33	17.72
	8H	16.48	17.54	16.90	17.93	18.33	15.99	17.05	16.42	17.44	17.84
	12H	16.47	17.49	16.90	17.87	18.30	16.09	17.10	16.52	17.49	17.92
4H	2H	15.37	16.58	15.77	16.93	17.31	13.76	14.97	14.16	15.32	15.70
	3H	16.48	17.48	16.89	17.88	18.28	15.53	16.54	15.95	16.94	17.34
	4H	16.87	17.77	17.30	18.19	18.63	16.25	17.15	16.68	17.56	18.00
	6H	17.11	17.89	17.57	18.34	18.80	16.82	17.60	17.28	18.04	18.50
	8H	17.16	17.88	17.62	18.33	18.80	17.01	17.74	17.48	18.18	18.65
	12H	17.16	17.81	17.65	18.29	18.76	17.15	17.80	17.63	18.28	18.75
8H	4H	17.03	17.76	17.49	18.20	18.67	16.46	17.18	16.92	17.63	18.10
	6H	17.34	17.94	17.84	18.43	18.91	17.13	17.73	17.63	18.22	18.70
	8H	17.42	17.96	17.94	18.47	18.96	17.39	17.93	17.91	18.44	18.93
	12H	17.45	17.93	17.96	18.42	18.99	17.60	18.07	18.11	18.57	19.13
12H	4H	17.03	17.68	17.52	18.16	18.63	16.45	17.10	16.94	17.58	18.05
	6H	17.36	17.89	17.87	18.41	18.89	17.14	17.68	17.66	18.19	18.68
	8H	17.47	17.95	17.98	18.44	19.01	17.45	17.92	17.96	18.41	18.98