

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: P1059697

Luminaire Tested: S123RDR-H560D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059697
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D930-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

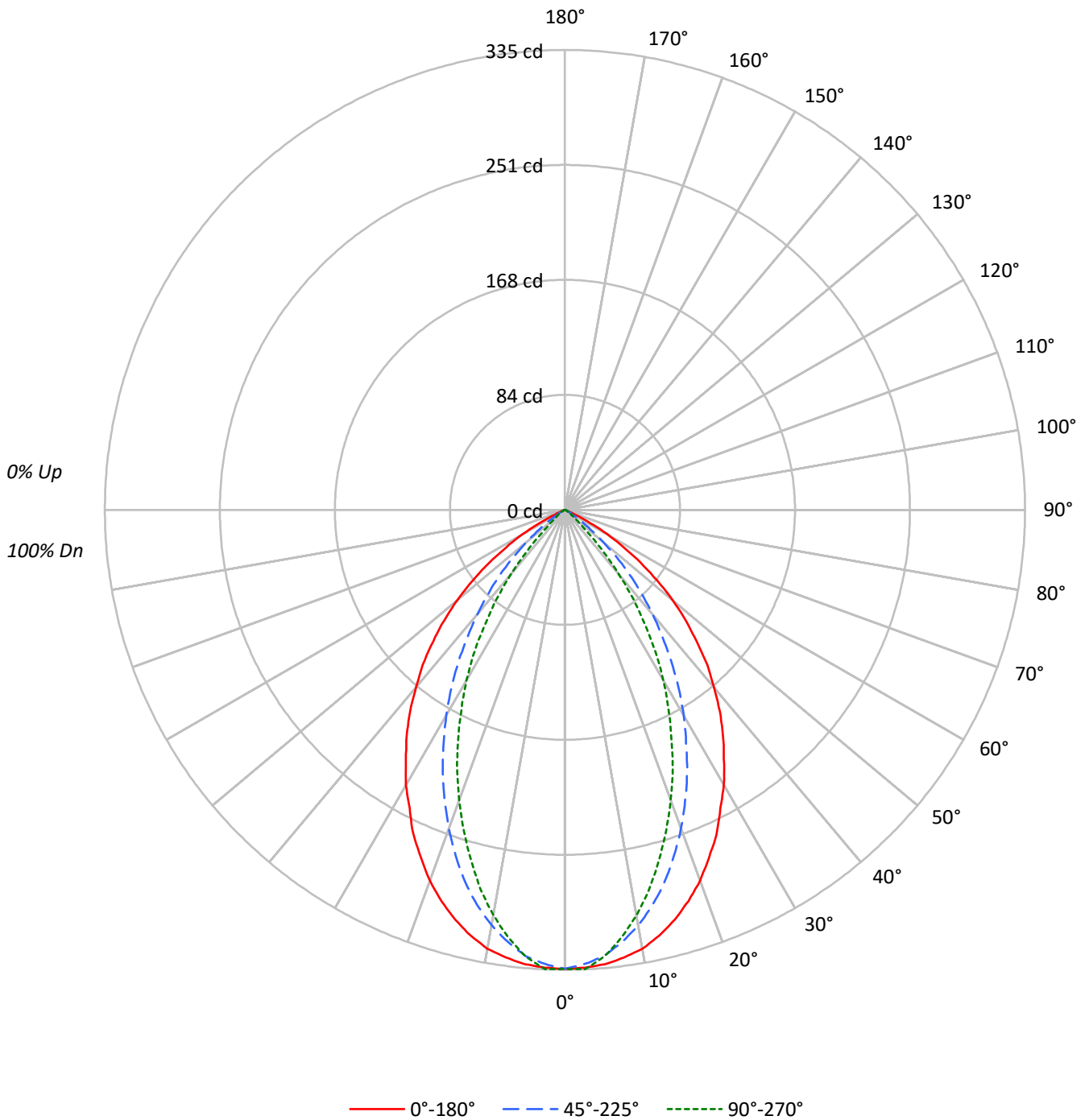
Lumens per Lamp: N/A
Luminaire Lumens: 381.5 lumens
Efficiency: N/A
Efficacy: 21.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3925	3925	3925
5°	3916	3846	3852
10°	3870	3665	3576
15°	3756	3410	3213
20°	3593	3088	2812
25°	3383	2727	2379
30°	3139	2343	1942
35°	2878	1937	1444
40°	2583	1519	924
45°	2253	1109	385
50°	1869	659	148
55°	1378	276	111
60°	834	101	63
65°	225	61	31
70°	0	17	17
75°	0	0	23
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2253 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.8	8.1
10°-20°	79.4	20.8
20°-30°	99.0	25.9
30°-40°	88.5	23.2
40°-50°	55.9	14.6
50°-60°	23.4	6.1
60°-70°	4.4	1.2
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	209.2	54.8
0°-40°	297.7	78.0
0°-60°	377.0	98.8
0°-90°	381.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	381.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	334	334	334	334	334	
5°	332	332	326	327	327	31
15°	309	302	280	269	264	87
25°	261	240	210	192	184	120
35°	201	172	135	111	101	125
45°	136	106	67	36	23	105
55°	67	46	14	5	5	60
65°	8	6	2	1	1	11
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	334.3	334.3	334.3	334.3	334.3
2.5°	333.8	334.3	331.1	334.3	334.9
5°	332.2	331.6	326.3	327.3	326.8
7.5°	328.9	327.3	317.6	315.5	314.4
10°	324.6	320.3	307.4	302.0	299.9
12.5°	317.6	311.7	295.0	286.4	283.2
15°	309.0	301.5	280.5	268.6	264.3
17.5°	298.8	288.0	264.3	251.4	245.0
20°	287.5	272.4	247.1	231.5	225.0
22.5°	274.0	257.3	228.8	212.1	205.1
25°	261.1	240.1	210.5	192.2	183.6
27.5°	245.0	222.9	191.1	172.3	163.1
30°	231.5	206.2	172.8	151.8	143.2
32.5°	215.3	189.0	154.0	130.8	122.7
35°	200.8	171.7	135.1	110.9	100.7
37.5°	185.2	155.1	116.3	91.0	81.3
40°	168.5	138.4	99.1	71.1	60.3
42.5°	153.4	121.7	81.8	52.8	42.0
45°	135.7	105.5	66.8	35.5	23.2
47.5°	119.5	90.4	50.6	19.9	12.4
50°	102.3	74.8	36.1	10.2	8.1
52.5°	84.5	59.8	23.7	7.0	6.5
55°	67.3	46.3	13.5	5.4	5.4
57.5°	50.6	33.4	7.0	4.3	3.8
60°	35.5	22.1	4.3	3.2	2.7
62.5°	20.5	12.9	3.2	2.2	2.2
65°	8.1	5.9	2.2	1.1	1.1
67.5°	0.5	1.6	1.1	0.5	0.5
70°	0.0	0.0	0.5	0.5	0.5
72.5°	0.0	0.0	0.5	0.5	0.5
75°	0.0	0.0	0.0	0.0	0.5
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	9.94	11.12	10.31	11.43	11.75	0.00	0.00	0.00	0.00	0.00
	3H	9.79	10.82	10.17	11.15	11.51	0.00	0.00	0.00	0.00	0.00
	4H	9.70	10.65	10.10	11.01	11.39	0.00	0.00	0.00	0.00	0.00
	6H	9.61	10.48	10.02	10.85	11.25	0.00	0.00	0.00	0.00	0.00
	8H	9.56	10.38	9.99	10.77	11.18	0.00	0.00	0.00	0.00	0.00
	12H	9.51	10.29	9.94	10.67	11.11	0.00	0.00	0.00	0.00	0.00
4H	2H	9.70	10.66	10.11	11.01	11.40	0.00	0.00	0.00	0.00	0.00
	3H	9.54	10.31	9.95	10.71	11.12	0.00	0.00	0.00	0.00	0.00
	4H	9.43	10.12	9.87	10.54	10.98	0.00	0.00	0.00	0.00	0.00
	6H	9.34	9.92	9.81	10.37	10.84	0.00	0.00	0.00	0.00	0.00
	8H	9.27	9.82	9.75	10.27	10.74	0.00	0.00	0.00	0.00	0.00
	12H	9.22	9.69	9.71	10.18	10.65	0.00	0.00	0.00	0.00	0.00
8H	4H	9.27	9.82	9.75	10.27	10.74	0.00	0.00	0.00	0.00	0.00
	6H	9.16	9.60	9.66	10.10	10.58	0.00	0.00	0.00	0.00	0.00
	8H	9.08	9.48	9.61	10.00	10.50	0.00	0.00	0.00	0.00	0.00
	12H	9.03	9.38	9.55	9.88	10.45	0.00	0.00	0.00	0.00	0.00
12H	4H	9.22	9.69	9.71	10.18	10.66	0.00	0.00	0.00	0.00	0.00
	6H	9.09	9.48	9.61	10.00	10.50	0.00	0.00	0.00	0.00	0.00
	8H	9.03	9.38	9.55	9.88	10.45	0.00	0.00	0.00	0.00	0.00