

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: P1059490

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059490
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-H1165D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

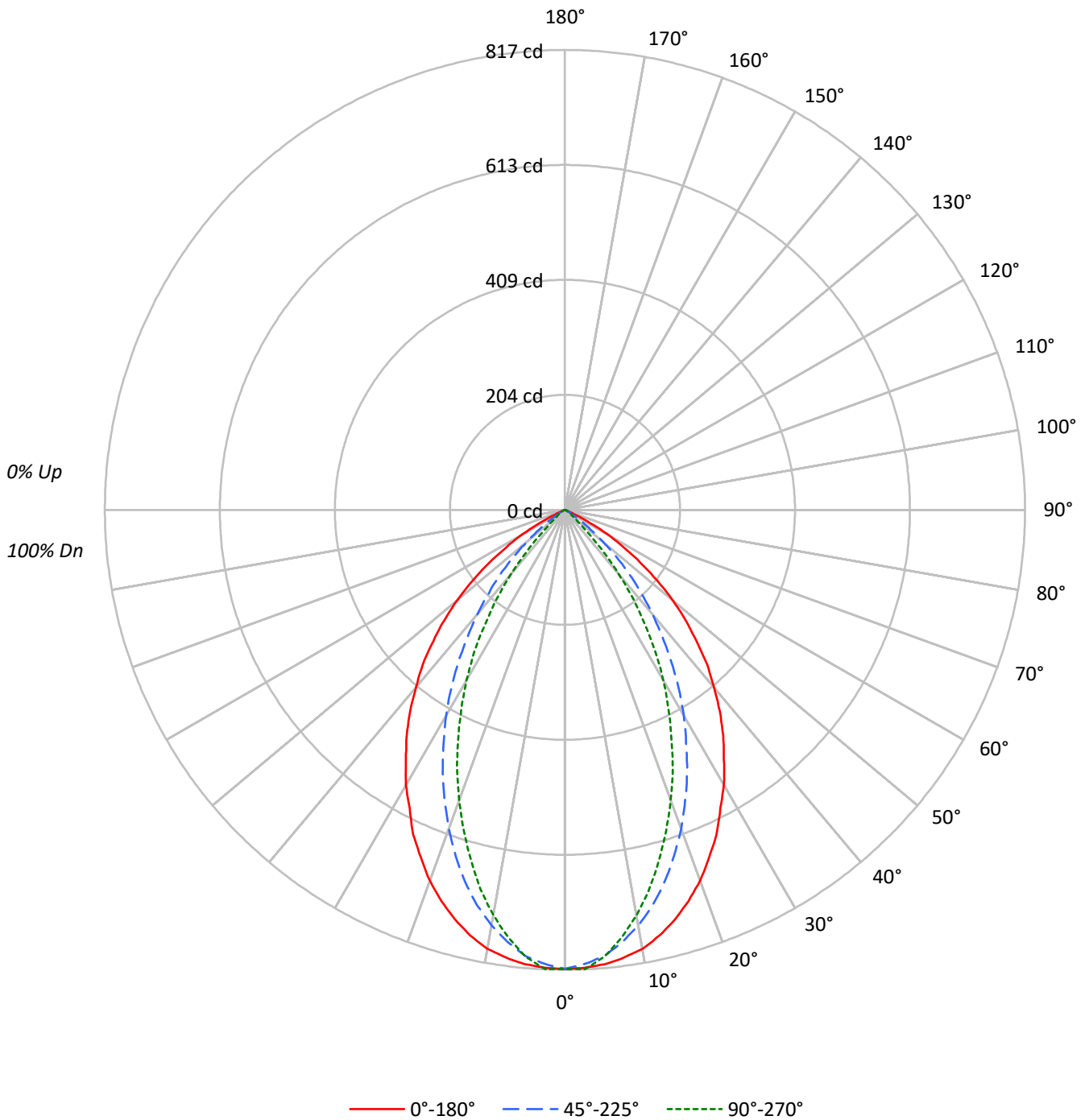
Lumens per Lamp: N/A
Luminaire Lumens: 930.5 lumens
Efficiency: N/A
Efficacy: 25.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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°	9576	9576	9576
5°	9550	9380	9396
10°	9442	8940	8721
15°	9164	8318	7839
20°	8762	7533	6859
25°	8252	6653	5802
30°	7657	5715	4736
35°	7021	4725	3521
40°	6300	3703	2255
45°	5495	2704	938
50°	4558	1608	360
55°	3360	671	268
60°	2036	247	155
65°	547	147	72
70°	0	45	45
75°	0	0	59
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5495 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.1	8.1
10°-20°	193.7	20.8
20°-30°	241.5	25.9
30°-40°	215.9	23.2
40°-50°	136.3	14.6
50°-60°	57.0	6.1
60°-70°	10.7	1.2
70°-80°	0.4	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°	510.3	54.8
0°-40°	726.2	78.0
0°-60°	919.5	98.8
0°-90°	930.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	930.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	810	809	796	798	797	77
15°	754	735	684	655	645	212
25°	637	586	514	469	448	292
35°	490	419	330	270	246	305
45°	331	257	163	87	56	255
55°	164	113	33	13	13	147
65°	20	14	5	3	3	28
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	815.5	815.5	815.5	815.5	815.5
2.5°	814.2	815.5	807.6	815.5	816.8
5°	810.2	808.9	795.8	798.4	797.1
7.5°	802.4	798.4	774.8	769.5	766.9
10°	791.9	781.3	749.8	736.7	731.4
12.5°	774.8	760.3	719.6	698.6	690.7
15°	753.8	735.4	684.2	655.3	644.8
17.5°	728.8	702.6	644.8	613.3	597.5
20°	701.2	664.5	602.8	564.7	548.9
22.5°	668.4	627.7	558.1	517.4	500.3
25°	636.9	585.7	513.5	468.8	447.8
27.5°	597.5	543.7	466.2	420.2	397.9
30°	564.7	503.0	421.5	370.3	349.3
32.5°	525.3	460.9	375.6	319.1	299.4
35°	489.8	418.9	329.6	270.5	245.6
37.5°	451.7	378.2	283.6	221.9	198.3
40°	411.0	337.5	241.6	173.3	147.1
42.5°	374.3	296.8	199.6	128.7	102.4
45°	330.9	257.4	162.8	86.7	56.5
47.5°	291.5	220.6	123.4	48.6	30.2
50°	249.5	182.5	88.0	25.0	19.7
52.5°	206.2	145.8	57.8	17.1	15.8
55°	164.1	112.9	32.8	13.1	13.1
57.5°	123.4	81.4	17.1	10.5	9.2
60°	86.7	53.8	10.5	7.9	6.6
62.5°	49.9	31.5	7.9	5.3	5.3
65°	19.7	14.4	5.3	2.6	2.6
67.5°	1.3	3.9	2.6	1.3	1.3
70°	0.0	0.0	1.3	1.3	1.3
72.5°	0.0	0.0	1.3	1.3	1.3
75°	0.0	0.0	0.0	0.0	1.3
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	13.04	14.22	13.40	14.53	14.84	0.00	0.00	0.00	0.00	0.00
	3H	12.88	13.91	13.26	14.24	14.61	0.00	0.00	0.00	0.00	0.00
	4H	12.79	13.75	13.20	14.10	14.49	0.00	0.00	0.00	0.00	0.00
	6H	12.70	13.57	13.12	13.94	14.34	0.00	0.00	0.00	0.00	0.00
	8H	12.65	13.47	13.08	13.86	14.27	0.00	0.00	0.00	0.00	0.00
	12H	12.60	13.38	13.03	13.77	14.20	0.00	0.00	0.00	0.00	0.00
4H	2H	12.80	13.75	13.20	14.10	14.49	0.00	0.00	0.00	0.00	0.00
	3H	12.63	13.40	13.05	13.81	14.21	0.00	0.00	0.00	0.00	0.00
	4H	12.53	13.21	12.96	13.63	14.08	0.00	0.00	0.00	0.00	0.00
	6H	12.43	13.02	12.90	13.46	13.94	0.00	0.00	0.00	0.00	0.00
	8H	12.37	12.91	12.84	13.36	13.83	0.00	0.00	0.00	0.00	0.00
	12H	12.31	12.79	12.80	13.27	13.75	0.00	0.00	0.00	0.00	0.00
8H	4H	12.37	12.91	12.84	13.36	13.83	0.00	0.00	0.00	0.00	0.00
	6H	12.25	12.69	12.76	13.19	13.67	0.00	0.00	0.00	0.00	0.00
	8H	12.18	12.57	12.71	13.09	13.59	0.00	0.00	0.00	0.00	0.00
	12H	12.12	12.47	12.64	12.97	13.55	0.00	0.00	0.00	0.00	0.00
12H	4H	12.31	12.79	12.80	13.27	13.75	0.00	0.00	0.00	0.00	0.00
	6H	12.18	12.57	12.71	13.09	13.59	0.00	0.00	0.00	0.00	0.00
	8H	12.12	12.47	12.64	12.97	13.55	0.00	0.00	0.00	0.00	0.00