

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: P1059655

Luminaire Tested: S123RDR-H560D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059655
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D830-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

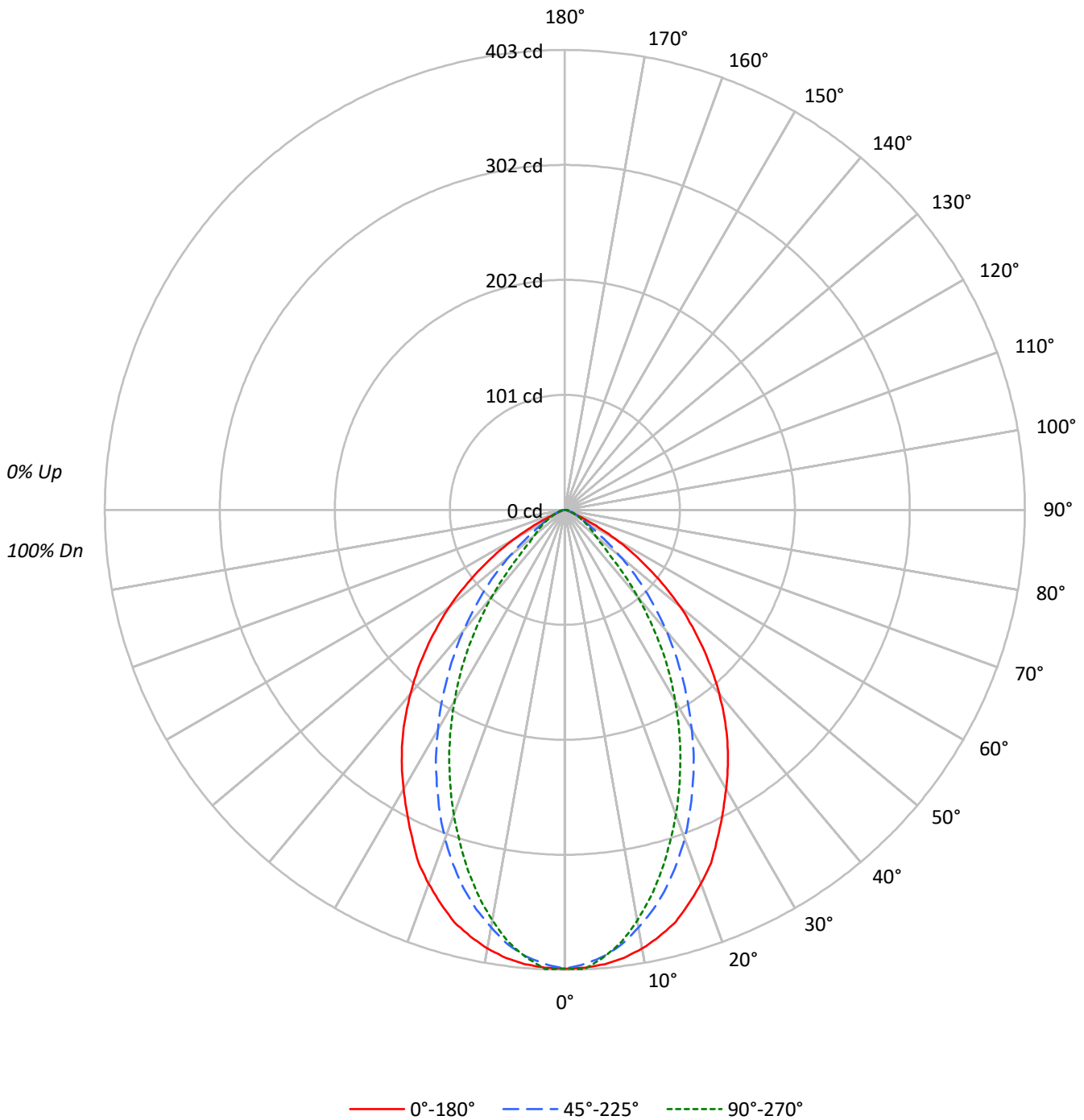
Lumens per Lamp: N/A
Luminaire Lumens: 519.1 lumens
Efficiency: N/A
Efficacy: 29.8 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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				100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4722	4722	4722
5°	4710	4630	4637
10°	4654	4431	4357
15°	4548	4170	3980
20°	4356	3835	3555
25°	4105	3436	3104
30°	3832	3013	2617
35°	3561	2570	2106
40°	3225	2118	1527
45°	2843	1644	920
50°	2411	1149	625
55°	1834	688	522
60°	1198	439	409
65°	503	328	328
70°	172	233	257
75°	141	168	200
80°	81	128	169
85°	81	81	162

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2843 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.1	7.2
10°-20°	97.2	18.7
20°-30°	124.6	24.0
30°-40°	117.0	22.5
40°-50°	81.6	15.7
50°-60°	42.2	8.1
60°-70°	14.4	2.8
70°-80°	4.1	0.8
80°-90°	0.9	0.2
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°	259.0	49.9
0°-40°	375.9	72.4
0°-60°	499.7	96.3
0°-90°	519.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	519.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	402	402	402	402	402	
5°	400	399	393	395	393	38
15°	374	365	343	332	327	105
25°	317	297	265	247	240	146
35°	248	218	179	156	147	155
45°	171	140	99	68	55	132
55°	90	67	34	26	26	81
65°	18	16	12	11	12	21
75°	3	3	4	4	4	3
85°	1	1	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	402.1	402.1	402.1	402.1	402.1
2.5°	401.5	402.1	398.4	402.1	402.7
5°	399.6	399.0	392.8	394.6	393.4
7.5°	395.9	394.0	384.0	381.6	381.6
10°	390.3	386.5	371.6	367.2	365.4
12.5°	382.8	377.8	358.5	350.4	347.3
15°	374.1	364.8	343.0	331.8	327.4
17.5°	361.6	349.2	325.5	312.5	305.6
20°	348.6	333.0	306.9	291.3	284.5
22.5°	334.9	316.2	286.3	269.5	262.0
25°	316.8	296.9	265.2	247.1	239.6
27.5°	299.4	278.2	244.6	224.1	216.6
30°	282.6	257.7	222.2	202.3	193.0
32.5°	265.8	237.8	201.0	179.3	170.5
35°	248.4	217.9	179.3	156.2	146.9
37.5°	229.7	198.6	158.7	133.8	122.6
40°	210.4	178.0	138.2	110.2	99.6
42.5°	191.1	159.3	117.6	89.0	76.6
45°	171.2	140.1	99.0	68.5	55.4
47.5°	151.3	120.8	80.9	49.8	41.7
50°	132.0	102.7	62.9	36.7	34.2
52.5°	110.8	85.3	47.3	30.5	29.9
55°	89.6	67.2	33.6	26.1	25.5
57.5°	71.0	52.3	24.3	21.8	21.2
60°	51.0	37.3	18.7	18.1	17.4
62.5°	33.6	25.5	14.9	14.3	14.3
65°	18.1	15.6	11.8	11.2	11.8
67.5°	7.5	8.7	8.7	9.3	9.3
70°	5.0	5.6	6.8	7.5	7.5
72.5°	3.7	4.4	5.0	5.6	5.6
75°	3.1	3.1	3.7	4.4	4.4
77.5°	1.9	2.5	2.5	3.1	3.7
80°	1.2	1.9	1.9	2.5	2.5
82.5°	0.6	1.2	1.2	1.9	1.9
85°	0.6	0.6	0.6	0.6	1.2
87.5°	0.0	0.0	0.0	0.0	0.6
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	11.73	12.99	12.09	13.30	13.61	5.24	6.50	5.60	6.81	7.12
	3H	11.68	12.79	12.06	13.12	13.49	6.01	7.12	6.39	7.45	7.81
	4H	11.63	12.66	12.03	13.01	13.39	6.21	7.24	6.62	7.60	7.98
	6H	11.56	12.50	11.97	12.87	13.27	6.36	7.30	6.77	7.67	8.06
	8H	11.51	12.41	11.95	12.80	13.20	6.39	7.29	6.83	7.68	8.08
	12H	11.47	12.32	11.90	12.71	13.14	6.41	7.26	6.84	7.64	8.07
4H	2H	11.57	12.60	11.98	12.95	13.34	5.49	6.52	5.89	6.87	7.26
	3H	11.56	12.39	11.97	12.80	13.20	6.40	7.23	6.81	7.64	8.04
	4H	11.51	12.25	11.94	12.67	13.11	6.67	7.42	7.11	7.84	8.28
	6H	11.45	12.09	11.91	12.54	13.00	6.89	7.53	7.35	7.97	8.44
	8H	11.40	11.99	11.87	12.44	12.91	6.95	7.55	7.42	8.00	8.47
	12H	11.35	11.87	11.84	12.36	12.83	6.99	7.51	7.48	8.00	8.47
8H	4H	11.39	11.99	11.86	12.44	12.91	6.66	7.25	7.13	7.70	8.17
	6H	11.33	11.82	11.84	12.31	12.80	6.93	7.41	7.43	7.91	8.39
	8H	11.28	11.71	11.80	12.23	12.73	7.04	7.47	7.56	7.99	8.48
	12H	11.24	11.63	11.76	12.12	12.70	7.11	7.49	7.62	7.99	8.56
12H	4H	11.35	11.87	11.84	12.36	12.83	6.62	7.14	7.11	7.63	8.10
	6H	11.27	11.71	11.80	12.23	12.72	6.89	7.32	7.41	7.84	8.33
	8H	11.24	11.63	11.76	12.12	12.70	7.03	7.41	7.55	7.91	8.48