

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: P1059569

Luminaire Tested: S123RDR-H1165D950-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059569
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D950-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER 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

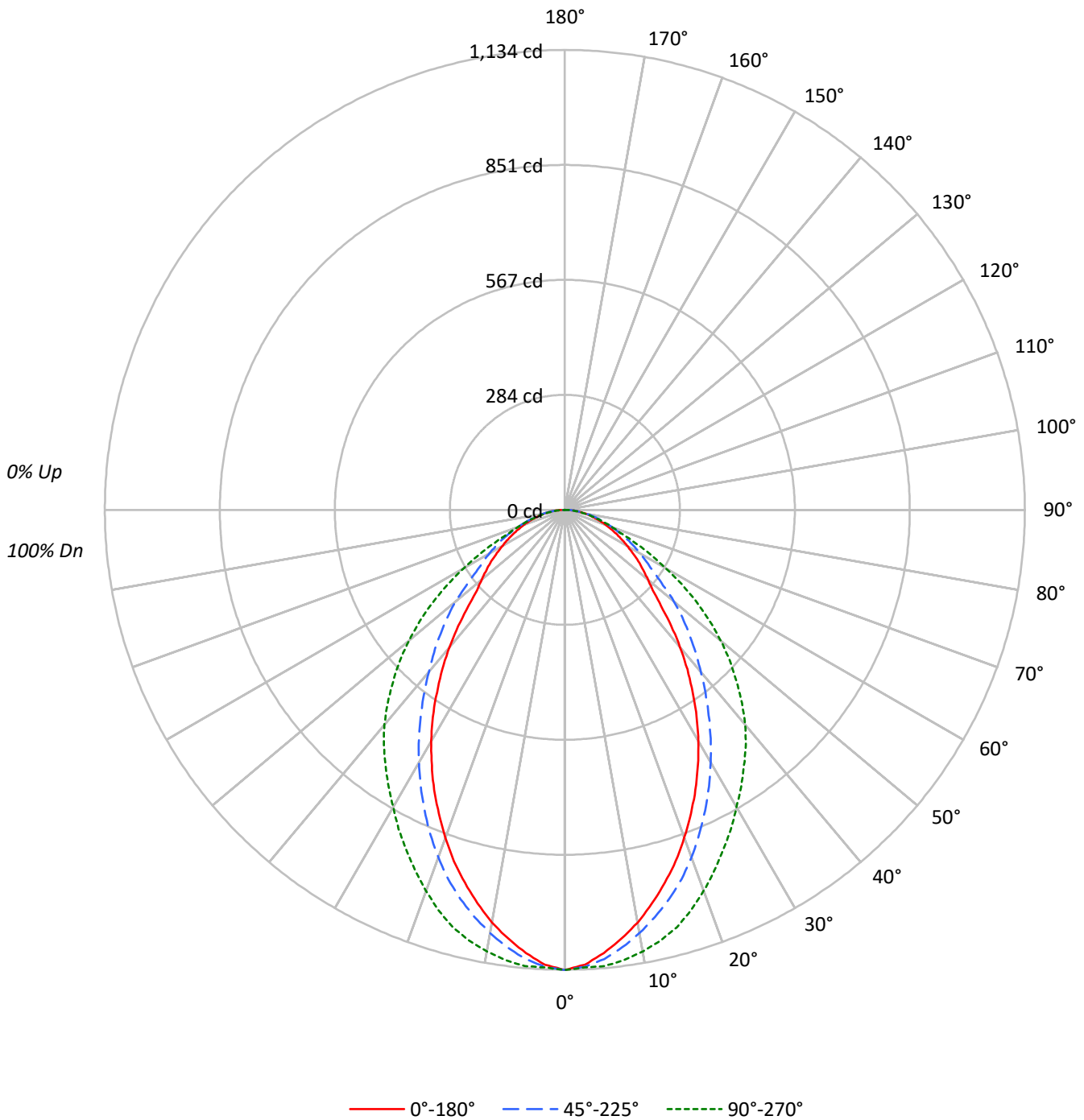
Lumens per Lamp: N/A
Luminaire Lumens: 2049.4 lumens
Efficiency: N/A
Efficacy: 56.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13322	13322	13322
5°	12934	13106	13310
10°	12322	12639	13179
15°	11577	12078	12952
20°	10753	11401	12499
25°	9874	10598	11977
30°	8927	9756	11470
35°	7874	8866	11039
40°	6769	7992	10601
45°	5566	7200	9939
50°	4883	6414	9160
55°	4520	5472	8115
60°	4154	5028	6717
65°	3882	4621	5285
70°	3653	4202	4202
75°	3439	3861	3620
80°	3239	3510	3057
85°	3045	3409	2331

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9939 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	5.1
10°-20°	281.2	13.7
20°-30°	381.3	18.6
30°-40°	398.7	19.5
40°-50°	345.8	16.9
50°-60°	257.2	12.6
60°-70°	165.0	8.1
70°-80°	88.5	4.3
80°-90°	26.7	1.3
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°	767.4	37.4
0°-40°	1166.1	56.9
0°-60°	1769.1	86.3
0°-90°	2049.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2049.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1097	1116	1112	1120	1129	103
15°	952	975	994	1033	1065	267
25°	762	786	818	872	924	349
35°	549	576	618	697	770	343
45°	335	360	434	527	598	264
55°	221	226	267	343	396	198
65°	140	152	166	177	190	139
75°	76	88	85	81	80	80
85°	23	28	25	21	17	26
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.5	1134.5	1134.5	1134.5	1134.5
2.5°	1122.6	1138.5	1127.9	1127.9	1129.2
5°	1097.3	1115.9	1111.9	1119.9	1129.2
7.5°	1066.7	1086.6	1088.0	1106.6	1119.9
10°	1033.4	1053.4	1060.0	1086.6	1105.3
12.5°	993.5	1016.1	1028.1	1061.4	1088.0
15°	952.3	974.9	993.5	1033.4	1065.4
17.5°	908.4	931.0	955.0	1000.2	1034.8
20°	860.5	884.5	912.4	957.6	1000.2
22.5°	811.3	836.6	865.9	915.1	962.9
25°	762.1	786.1	818.0	872.5	924.4
27.5°	710.2	735.5	768.8	828.6	887.1
30°	658.4	683.6	719.5	783.4	845.9
32.5°	605.2	630.4	669.0	740.8	808.7
35°	549.3	575.9	618.5	696.9	770.1
37.5°	496.1	521.4	569.3	655.7	732.8
40°	441.6	468.2	521.4	614.5	691.6
42.5°	388.4	415.0	477.5	570.6	646.4
45°	335.2	360.4	433.6	526.7	598.5
47.5°	293.9	312.6	392.4	480.1	552.0
50°	267.3	274.0	351.1	434.9	501.4
52.5°	243.4	248.7	305.9	389.7	449.6
55°	220.8	226.1	267.3	343.1	396.4
57.5°	198.2	204.8	238.1	295.3	343.1
60°	176.9	184.9	214.1	252.7	286.0
62.5°	158.3	167.6	190.2	214.1	236.7
65°	139.7	151.6	166.3	176.9	190.2
67.5°	122.4	135.7	143.6	146.3	147.6
70°	106.4	119.7	122.4	122.4	122.4
72.5°	90.4	105.1	102.4	101.1	99.8
75°	75.8	87.8	85.1	81.1	79.8
77.5°	61.2	71.8	67.8	65.2	61.2
80°	47.9	55.9	51.9	49.2	45.2
82.5°	35.9	41.2	37.2	34.6	30.6
85°	22.6	27.9	25.3	21.3	17.3
87.5°	12.0	16.0	13.3	12.0	6.7
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	15.78	17.26	16.15	17.58	17.89	18.54	20.02	18.90	20.34	20.65
	3H	17.49	18.82	17.87	19.15	19.51	19.56	20.89	19.94	21.22	21.58
	4H	18.15	19.40	18.55	19.75	20.13	19.93	21.17	20.33	21.52	21.90
	6H	18.65	19.80	19.07	20.17	20.56	20.18	21.33	20.59	21.70	22.09
	8H	18.83	19.93	19.26	20.32	20.72	20.25	21.34	20.68	21.73	22.14
	12H	18.96	20.01	19.39	20.39	20.82	20.29	21.33	20.72	21.72	22.14
4H	2H	16.56	17.80	16.96	18.15	18.53	18.81	20.06	19.21	20.40	20.78
	3H	18.48	19.52	18.90	19.92	20.32	20.06	21.10	20.48	21.50	21.90
	4H	19.29	20.22	19.73	20.64	21.08	20.55	21.48	20.98	21.90	22.34
	6H	19.94	20.74	20.39	21.19	21.65	20.93	21.74	21.39	22.18	22.64
	8H	20.16	20.92	20.63	21.36	21.83	21.04	21.80	21.51	22.24	22.71
	12H	20.34	21.01	20.82	21.49	21.96	21.11	21.79	21.60	22.27	22.74
8H	4H	19.61	20.37	20.08	20.81	21.28	20.74	21.50	21.21	21.94	22.41
	6H	20.41	21.03	20.90	21.52	22.00	21.23	21.85	21.73	22.35	22.82
	8H	20.73	21.29	21.25	21.80	22.29	21.41	21.97	21.92	22.48	22.97
	12H	21.01	21.51	21.52	22.00	22.57	21.54	22.04	22.05	22.53	23.09
12H	4H	19.64	20.31	20.12	20.79	21.26	20.76	21.43	21.24	21.91	22.38
	6H	20.46	21.02	20.98	21.53	22.02	21.27	21.83	21.78	22.34	22.83
	8H	20.85	21.35	21.36	21.84	22.41	21.50	21.99	22.01	22.49	23.05