

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: P1059557

Luminaire Tested: S123RDR-H1165D940-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059557
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D940-X4F0-XX-UDD-SVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

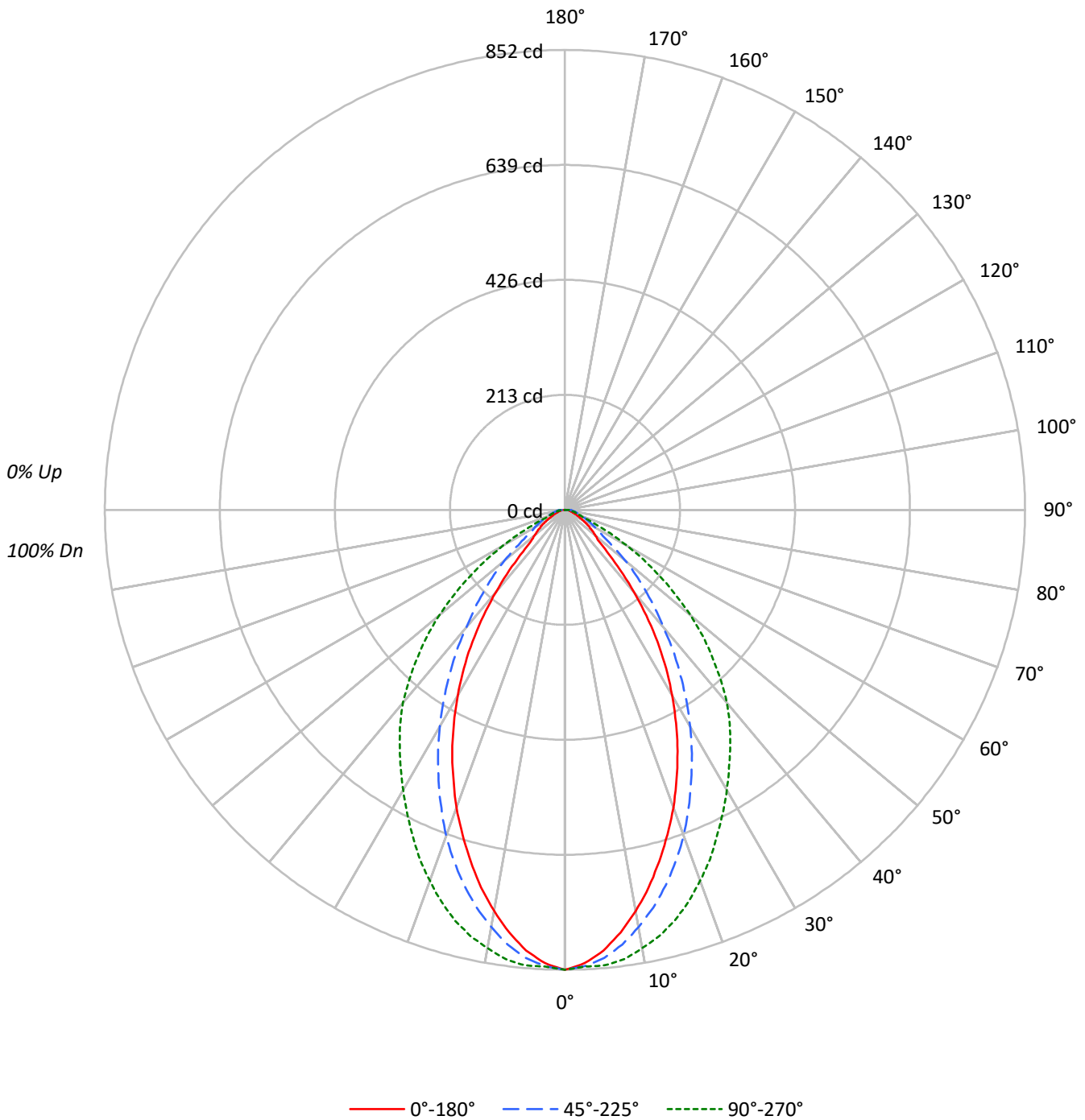
Lumens per Lamp: N/A
Luminaire Lumens: 1141.0 lumens
Efficiency: N/A
Efficacy: 31.3 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10005	10005	10005
5°	9662	9822	9984
10°	9002	9358	9832
15°	8195	8754	9571
20°	7336	8035	9138
25°	6398	7171	8638
30°	5380	6290	8129
35°	4279	5331	7649
40°	3050	4347	7149
45°	1818	3491	6403
50°	1341	2658	5544
55°	1120	1808	4406
60°	907	1489	3095
65°	725	1278	1659
70°	597	1109	1027
75°	563	1071	957
80°	588	1177	926
85°	835	1671	1172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6403 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.3	6.9
10°-20°	203.3	17.8
20°-30°	259.3	22.7
30°-40°	244.0	21.4
40°-50°	175.3	15.4
50°-60°	100.5	8.8
60°-70°	46.0	4.0
70°-80°	23.1	2.0
80°-90°	11.3	1.0
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°	540.9	47.4
0°-40°	784.9	68.8
0°-60°	1060.7	93.0
0°-90°	1141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1141.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	820	836	833	840	847	76
15°	674	698	720	759	787	188
25°	494	516	554	613	667	225
35°	298	320	372	456	534	185
45°	110	133	210	310	386	92
55°	55	56	88	163	215	49
65°	26	36	46	51	60	26
75°	12	25	24	21	21	14
85°	6	12	12	11	9	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	852.0	852.0	852.0	852.0	852.0
2.5°	840.8	853.2	845.8	845.8	847.0
5°	819.7	835.8	833.3	839.6	847.0
7.5°	789.8	807.2	812.2	827.1	839.6
10°	755.0	774.9	784.8	808.5	824.6
12.5°	716.4	738.8	755.0	784.8	808.5
15°	674.1	697.8	720.1	758.7	787.3
17.5°	630.6	654.2	682.8	727.6	761.2
20°	587.1	610.7	643.0	690.3	731.3
22.5°	539.8	563.4	598.3	651.7	701.5
25°	493.8	516.2	553.5	613.2	666.7
27.5°	445.3	467.7	508.7	573.4	633.1
30°	396.8	419.2	463.9	533.6	599.5
32.5°	348.3	369.4	417.9	495.0	565.9
35°	298.5	319.7	371.9	456.5	533.6
37.5°	247.5	268.7	329.6	421.6	501.2
40°	199.0	222.6	283.6	386.8	466.4
42.5°	151.7	176.6	246.3	349.5	426.6
45°	109.5	133.1	210.2	309.7	385.6
47.5°	83.3	95.8	177.9	269.9	345.8
50°	73.4	74.6	145.5	233.8	303.5
52.5°	63.4	64.7	113.2	199.0	258.7
55°	54.7	56.0	88.3	162.9	215.2
57.5°	46.0	48.5	72.1	129.4	172.9
60°	38.6	43.5	63.4	98.3	131.8
62.5°	31.1	39.8	54.7	72.1	94.5
65°	26.1	36.1	46.0	51.0	59.7
67.5°	21.1	33.6	38.6	36.1	36.1
70°	17.4	29.9	32.3	29.9	29.9
72.5°	14.9	28.6	27.4	24.9	24.9
75°	12.4	24.9	23.6	21.1	21.1
77.5°	11.2	21.1	19.9	18.7	17.4
80°	8.7	17.4	17.4	16.2	13.7
82.5°	7.5	14.9	14.9	13.7	11.2
85°	6.2	12.4	12.4	11.2	8.7
87.5°	5.0	11.2	11.2	10.0	6.2
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	7.98	9.30	8.35	9.62	9.93	15.21	16.53	15.58	16.84	17.16
	3H	9.39	10.55	9.76	10.88	11.25	15.45	16.62	15.83	16.95	17.31
	4H	9.95	11.04	10.35	11.39	11.77	15.55	16.64	15.96	16.99	17.38
	6H	10.41	11.41	10.82	11.78	12.17	15.66	16.66	16.08	17.03	17.43
	8H	10.59	11.54	11.02	11.93	12.34	15.71	16.66	16.14	17.05	17.45
	12H	10.78	11.69	11.22	12.07	12.50	15.76	16.67	16.19	17.05	17.48
4H	2H	9.06	10.15	9.46	10.50	10.88	15.17	16.26	15.57	16.61	17.00
	3H	10.75	11.64	11.16	12.05	12.45	15.54	16.43	15.95	16.84	17.24
	4H	11.58	12.38	12.02	12.80	13.24	15.72	16.52	16.16	16.94	17.39
	6H	12.24	12.93	12.70	13.38	13.84	15.95	16.64	16.41	17.08	17.55
	8H	12.50	13.14	12.96	13.59	14.06	16.05	16.69	16.52	17.14	17.61
	12H	12.75	13.32	13.24	13.80	14.28	16.16	16.74	16.65	17.22	17.69
8H	4H	12.02	12.66	12.49	13.11	13.58	15.77	16.41	16.24	16.86	17.33
	6H	12.97	13.50	13.47	13.99	14.47	16.10	16.63	16.60	17.13	17.61
	8H	13.43	13.91	13.95	14.42	14.92	16.29	16.77	16.81	17.28	17.78
	12H	13.91	14.33	14.42	14.83	15.40	16.52	16.95	17.04	17.44	18.01
12H	4H	12.08	12.65	12.56	13.13	13.61	15.76	16.33	16.25	16.82	17.29
	6H	13.12	13.59	13.64	14.11	14.60	16.13	16.61	16.65	17.12	17.61
	8H	13.71	14.13	14.22	14.62	15.19	16.39	16.81	16.90	17.31	17.88