

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: P1059651

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059651
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D950-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE 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

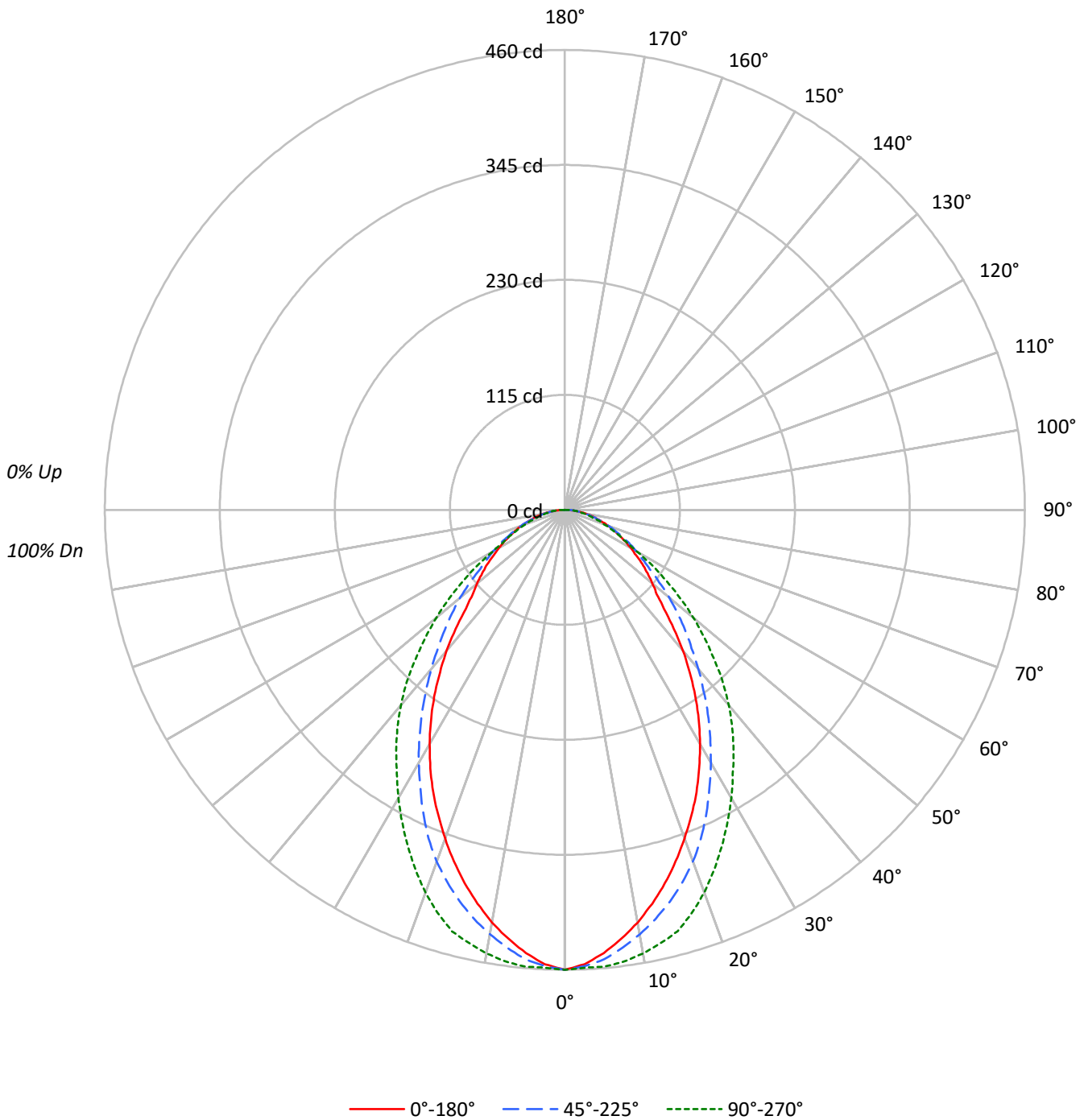
Lumens per Lamp: N/A
Luminaire Lumens: 808.3 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5402	5402	5402
5°	5245	5320	5403
10°	4998	5140	5372
15°	4702	4933	5304
20°	4374	4680	5091
25°	4037	4339	4811
30°	3666	3962	4514
35°	3263	3575	4216
40°	2816	3185	3907
45°	2327	2820	3504
50°	2090	2488	3060
55°	1937	2123	2537
60°	1785	1933	1942
65°	1662	1748	1628
70°	1562	1590	1428
75°	1475	1420	1257
80°	1393	1285	1177
85°	1334	1442	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3504 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	5.3
10°-20°	114.8	14.2
20°-30°	155.3	19.2
30°-40°	159.6	19.7
40°-50°	134.0	16.6
50°-60°	96.1	11.9
60°-70°	61.2	7.6
70°-80°	33.6	4.2
80°-90°	11.2	1.4
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°	312.7	38.7
0°-40°	472.2	58.4
0°-60°	702.3	86.9
0°-90°	808.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	808.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	445	453	451	454	458	42
15°	387	398	406	423	436	108
25°	312	323	335	353	371	143
35°	228	240	249	272	294	142
45°	140	152	170	194	211	111
55°	95	97	104	118	124	84
65°	60	63	63	59	59	60
75°	32	36	31	29	28	35
85°	10	10	11	11	10	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	460.0	460.0	460.0	460.0	460.0
2.5°	454.9	461.2	456.8	457.2	458.4
5°	445.0	452.9	451.3	454.5	458.4
7.5°	432.7	441.4	441.8	449.3	455.7
10°	419.2	428.3	431.1	442.6	450.5
12.5°	403.4	413.3	419.2	433.5	443.8
15°	386.8	397.5	405.8	423.2	436.3
17.5°	368.6	380.0	390.7	409.3	422.8
20°	350.0	362.2	374.5	391.9	407.4
22.5°	330.6	343.2	355.9	372.9	389.9
25°	311.6	323.4	334.9	353.1	371.3
27.5°	291.0	303.2	313.1	333.3	352.3
30°	270.4	282.7	292.2	313.1	332.9
32.5°	249.0	261.7	270.4	292.2	312.7
35°	227.6	239.9	249.4	271.6	294.1
37.5°	205.1	218.5	228.0	253.0	275.1
40°	183.7	196.4	207.8	234.0	254.9
42.5°	161.5	174.6	187.6	214.6	234.0
45°	140.1	152.4	169.8	194.4	211.0
47.5°	124.7	132.6	152.8	173.4	189.2
50°	114.4	117.6	136.2	154.4	167.5
52.5°	104.1	106.5	119.2	135.8	145.7
55°	94.6	96.6	103.7	117.6	123.9
57.5°	84.3	86.3	92.2	100.2	103.7
60°	76.0	77.6	82.3	83.5	82.7
62.5°	67.7	70.1	72.4	69.7	68.5
65°	59.8	63.3	62.9	59.4	58.6
67.5°	52.7	56.2	54.2	50.7	49.5
70°	45.5	49.1	46.3	42.8	41.6
72.5°	38.8	42.8	38.4	35.2	34.4
75°	32.5	35.6	31.3	28.9	27.7
77.5°	26.5	28.9	24.9	23.0	22.2
80°	20.6	22.2	19.0	17.8	17.4
82.5°	15.0	15.8	13.9	14.6	14.3
85°	9.9	10.3	10.7	11.1	9.9
87.5°	4.8	6.7	6.7	6.3	5.1
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	14.51	13.41	14.82	15.14	14.12	15.58	14.48	15.89	16.21
	3H	14.74	16.05	15.12	16.38	16.74	15.20	16.51	15.58	16.84	17.20
	4H	15.40	16.62	15.80	16.97	17.35	15.60	16.83	16.00	17.18	17.56
	6H	15.90	17.03	16.31	17.40	17.79	15.91	17.05	16.33	17.41	17.81
	8H	16.07	17.15	16.50	17.54	17.94	16.05	17.13	16.48	17.52	17.92
	12H	16.20	17.23	16.63	17.61	18.04	16.17	17.20	16.60	17.58	18.01
4H	2H	13.65	14.87	14.05	15.22	15.60	14.52	15.75	14.92	16.10	16.48
	3H	15.57	16.59	15.99	16.99	17.39	15.84	16.86	16.25	17.26	17.66
	4H	16.39	17.30	16.82	17.72	18.16	16.36	17.27	16.79	17.69	18.13
	6H	17.03	17.83	17.49	18.27	18.74	16.79	17.59	17.25	18.03	18.49
	8H	17.25	18.00	17.72	18.44	18.91	16.98	17.72	17.44	18.17	18.64
	12H	17.43	18.09	17.91	18.57	19.04	17.16	17.83	17.65	18.31	18.78
8H	4H	16.62	17.37	17.09	17.81	18.28	16.60	17.35	17.07	17.79	18.26
	6H	17.41	18.03	17.91	18.52	19.00	17.15	17.76	17.65	18.26	18.74
	8H	17.72	18.28	18.24	18.79	19.28	17.43	17.98	17.94	18.49	18.98
	12H	17.99	18.48	18.50	18.97	19.54	17.72	18.21	18.23	18.70	19.27
12H	4H	16.63	17.30	17.12	17.78	18.25	16.63	17.29	17.11	17.77	18.24
	6H	17.45	18.00	17.96	18.51	19.00	17.20	17.76	17.72	18.27	18.76
	8H	17.82	18.31	18.33	18.80	19.37	17.54	18.03	18.05	18.52	19.09