

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: P1059636

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D940-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

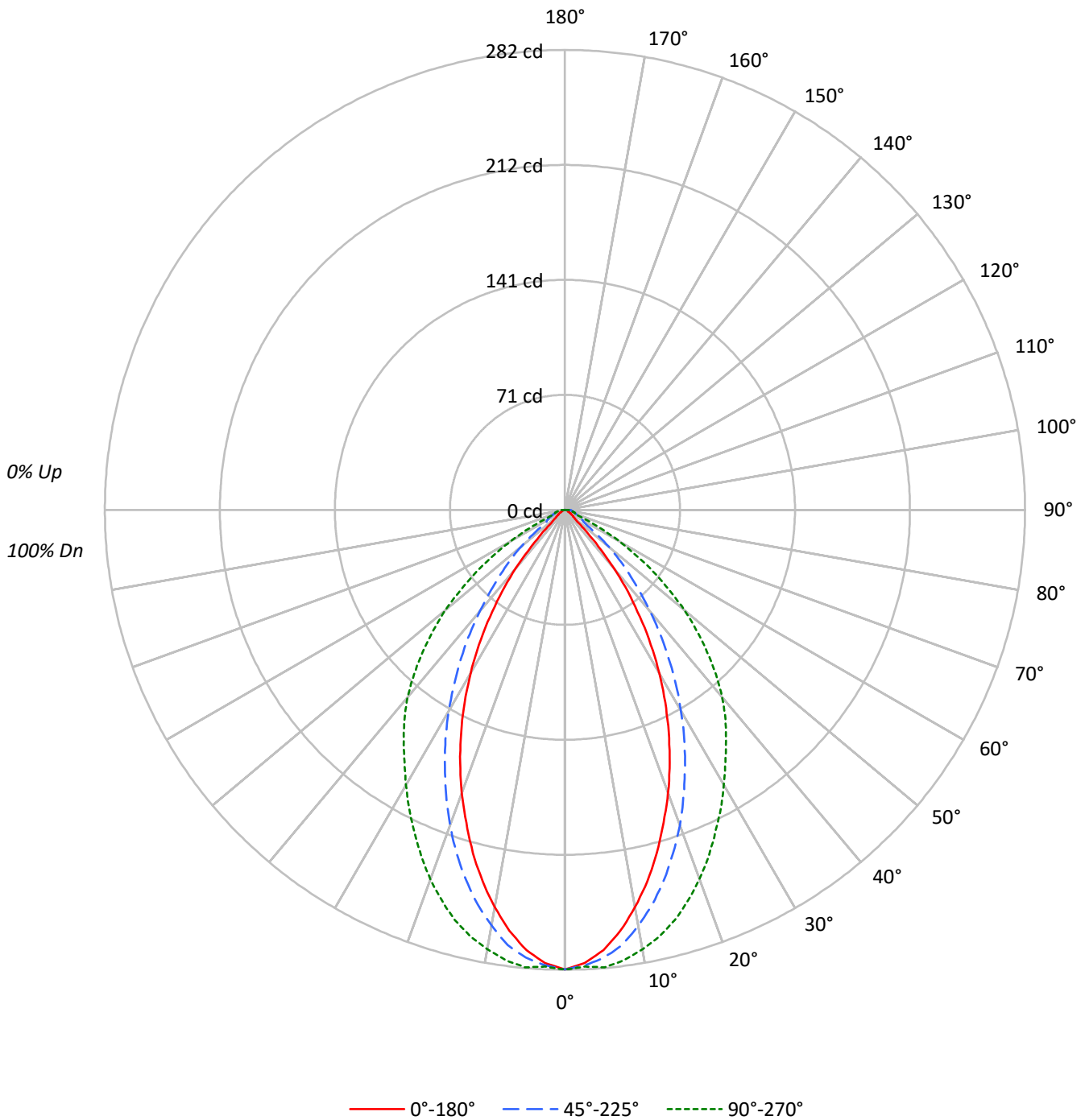
Lumens per Lamp: N/A
Luminaire Lumens: 338.4 lumens
Efficiency: N/A
Efficacy: 28.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059636

CATALOG NUMBER: S123RDR-H340D940-X4F0-XX-UDD-BVL-W

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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3309	3309	3309
5°	3196	3247	3318
10°	2950	3087	3263
15°	2648	2854	3166
20°	2309	2573	3013
25°	1949	2256	2826
30°	1566	1928	2641
35°	1147	1587	2468
40°	716	1237	2299
45°	271	923	2048
50°	128	636	1746
55°	98	348	1349
60°	70	296	888
65°	53	258	370
70°	51	240	240
75°	68	254	254
80°	101	298	277
85°	202	498	404

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.9	7.6
10°-20°	66.3	19.6
20°-30°	82.1	24.3
30°-40°	73.6	21.8
40°-50°	48.3	14.3
50°-60°	24.2	7.1
60°-70°	9.4	2.8
70°-80°	5.3	1.6
80°-90°	3.3	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°	174.3	51.5
0°-40°	247.9	73.3
0°-60°	320.4	94.7
0°-90°	338.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	338.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	282	282	282	282	282	
5°	271	276	276	278	282	25
15°	218	227	235	250	260	61
25°	150	160	174	199	218	69
35°	80	91	111	144	172	50
45°	16	26	56	95	123	16
55°	5	6	17	47	66	4
65°	2	6	9	12	13	2
75°	2	6	6	6	6	2
85°	2	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	281.8	281.8	281.8	281.8	281.8
2.5°	278.1	282.2	279.6	280.0	280.4
5°	271.1	275.5	275.5	278.5	281.5
7.5°	260.4	265.5	269.2	274.4	278.5
10°	247.4	253.7	258.9	268.1	273.7
12.5°	233.3	241.1	247.8	260.0	267.8
15°	217.8	226.7	234.8	250.4	260.4
17.5°	201.1	210.0	220.7	238.9	251.1
20°	184.8	193.7	205.9	226.3	241.1
22.5°	167.8	177.0	190.0	212.6	230.0
25°	150.4	159.6	174.1	198.9	218.1
27.5°	133.0	142.2	158.5	185.5	206.7
30°	115.5	124.8	142.2	171.1	194.8
32.5°	98.1	108.1	126.3	157.8	183.0
35°	80.0	90.7	110.7	144.1	172.2
37.5°	63.3	73.3	95.9	132.2	161.5
40°	46.7	57.4	80.7	120.7	150.0
42.5°	30.4	41.8	67.0	108.1	137.0
45°	16.3	26.3	55.6	95.2	123.3
47.5°	8.9	14.4	44.8	81.5	109.3
50°	7.0	8.1	34.8	69.6	95.6
52.5°	5.9	6.7	24.8	58.5	80.4
55°	4.8	5.9	17.0	46.7	65.9
57.5°	4.1	5.2	13.3	36.3	51.5
60°	3.0	4.4	12.6	26.7	37.8
62.5°	2.2	4.8	11.1	18.5	24.8
65°	1.9	5.6	9.3	12.2	13.3
67.5°	1.5	5.9	8.1	7.8	7.8
70°	1.5	5.6	7.0	6.7	7.0
72.5°	1.5	5.9	6.3	5.9	6.3
75°	1.5	5.6	5.6	5.6	5.6
77.5°	1.5	5.2	5.2	4.8	4.8
80°	1.5	4.4	4.4	4.4	4.1
82.5°	1.5	4.1	4.1	4.1	3.3
85°	1.5	3.7	3.7	3.7	3.0
87.5°	1.1	3.3	3.7	3.3	2.2
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	0.00	0.00	0.00	0.00	0.00	10.76	12.02	11.13	12.33	12.65
	3H	0.00	0.00	0.00	0.31	0.67	10.85	11.96	11.23	12.29	12.65
	4H	0.00	1.01	0.38	1.36	1.75	10.92	11.96	11.33	12.31	12.69
	6H	0.97	1.92	1.39	2.29	2.69	11.03	11.98	11.44	12.35	12.74
	8H	1.46	2.35	1.89	2.75	3.15	11.09	11.98	11.52	12.37	12.78
	12H	2.02	2.88	2.45	3.26	3.69	11.17	12.03	11.60	12.41	12.84
4H	2H	0.00	0.82	0.19	1.17	1.56	10.62	11.65	11.02	12.01	12.39
	3H	2.10	2.94	2.51	3.35	3.75	10.80	11.64	11.21	12.05	12.45
	4H	3.48	4.24	3.92	4.66	5.10	10.95	11.71	11.39	12.13	12.57
	6H	4.56	5.21	5.02	5.66	6.13	11.17	11.83	11.64	12.27	12.74
	8H	5.02	5.63	5.49	6.08	6.55	11.30	11.91	11.77	12.35	12.83
	12H	5.52	6.06	6.00	6.54	7.01	11.47	12.01	11.96	12.49	12.97
8H	4H	4.45	5.06	4.92	5.51	5.98	10.95	11.56	11.42	12.00	12.48
	6H	5.96	6.46	6.46	6.95	7.44	11.28	11.78	11.78	12.28	12.76
	8H	6.74	7.19	7.26	7.70	8.20	11.51	11.96	12.04	12.48	12.97
	12H	7.54	7.94	8.06	8.44	9.01	11.85	12.25	12.37	12.74	13.32
12H	4H	4.63	5.16	5.11	5.65	6.12	10.93	11.47	11.42	11.95	12.43
	6H	6.27	6.72	6.79	7.24	7.73	11.30	11.75	11.82	12.27	12.76
	8H	7.23	7.63	7.75	8.13	8.70	11.61	12.01	12.13	12.50	13.08