

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: P1059590

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

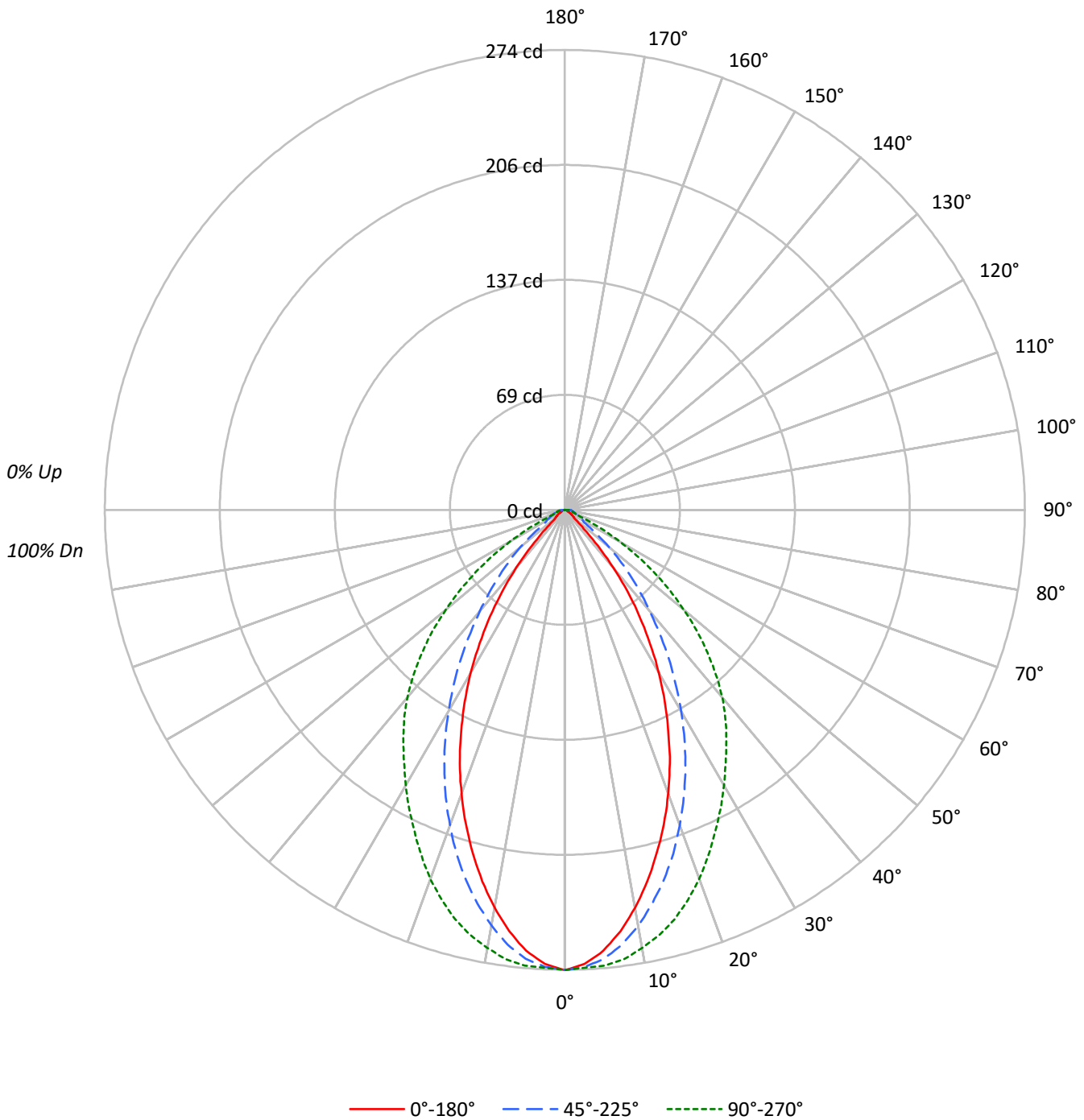
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 329.4 lumens
Efficiency: N/A
Efficacy: 28.2 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

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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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	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	64	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
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	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3220	3220	3220
5°	3108	3164	3212
10°	2870	3000	3160
15°	2574	2773	3068
20°	2248	2499	2924
25°	1890	2200	2743
30°	1519	1877	2569
35°	1112	1545	2404
40°	688	1202	2236
45°	264	905	1991
50°	130	621	1684
55°	102	344	1323
60°	68	287	885
65°	58	256	397
70°	58	230	230
75°	77	250	227
80°	115	311	257
85°	175	512	337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1991 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.1	7.6
10°-20°	64.4	19.5
20°-30°	79.9	24.3
30°-40°	71.6	21.7
40°-50°	47.0	14.3
50°-60°	23.6	7.2
60°-70°	9.3	2.8
70°-80°	5.2	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°	169.4	51.4
0°-40°	241.0	73.2
0°-60°	311.6	94.6
0°-90°	329.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	329.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	274	274	274	274	274	
5°	264	268	268	270	272	24
15°	212	218	228	244	252	59
25°	146	155	170	194	212	67
35°	78	88	108	141	168	48
45°	16	26	54	92	120	15
55°	5	6	17	45	65	4
65°	2	6	9	12	14	2
75°	2	6	6	5	5	2
85°	1	4	4	4	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	274.2	274.2	274.2	274.2	274.2
2.5°	270.9	274.6	272.5	272.5	273.0
5°	263.7	267.9	268.4	270.0	272.5
7.5°	253.3	258.7	261.2	266.3	270.0
10°	240.7	246.6	251.6	260.4	265.0
12.5°	226.8	232.7	240.3	252.4	259.6
15°	211.7	218.5	228.1	243.6	252.4
17.5°	196.2	202.9	214.7	232.3	243.6
20°	179.9	187.4	200.0	220.1	234.0
22.5°	163.5	171.9	185.3	207.1	223.1
25°	145.9	155.1	169.8	193.7	211.7
27.5°	129.1	138.8	154.3	180.3	200.8
30°	112.0	121.6	138.4	166.5	189.5
32.5°	94.3	105.2	122.9	153.5	178.2
35°	77.6	88.1	107.8	140.9	167.7
37.5°	61.2	71.7	92.2	128.7	157.2
40°	44.9	55.8	78.4	117.0	145.9
42.5°	29.4	40.7	66.3	105.2	133.3
45°	15.9	26.4	54.5	91.8	119.9
47.5°	8.8	14.3	44.0	79.2	106.9
50°	7.1	8.0	34.0	67.5	92.2
52.5°	5.9	6.7	24.3	56.2	78.8
55°	5.0	5.9	16.8	45.3	64.6
57.5°	4.2	5.0	13.4	34.8	50.7
60°	2.9	5.0	12.2	25.6	37.7
62.5°	2.5	5.0	10.5	17.6	25.2
65°	2.1	5.9	9.2	11.7	14.3
67.5°	1.7	5.9	8.0	7.5	7.5
70°	1.7	5.9	6.7	6.3	6.7
72.5°	1.7	6.3	6.3	5.9	5.9
75°	1.7	5.5	5.5	5.0	5.0
77.5°	1.7	5.0	5.0	4.6	4.6
80°	1.7	4.6	4.6	4.2	3.8
82.5°	1.7	4.2	4.2	3.8	3.4
85°	1.3	3.8	3.8	3.8	2.5
87.5°	1.3	3.4	3.8	3.4	2.1
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	0.00	0.00	0.00	0.00	0.00	10.61	11.87	10.97	12.18	12.49
	3H	0.00	0.17	0.00	0.50	0.86	10.68	11.80	11.07	12.13	12.49
	4H	0.24	1.27	0.64	1.62	2.01	10.75	11.78	11.15	12.13	12.52
	6H	1.29	2.24	1.70	2.61	3.01	10.85	11.80	11.26	12.17	12.56
	8H	1.83	2.73	2.26	3.12	3.53	10.91	11.81	11.34	12.20	12.61
	12H	2.33	3.19	2.76	3.57	4.00	10.98	11.84	11.41	12.22	12.65
4H	2H	0.00	0.79	0.16	1.15	1.53	10.47	11.50	10.87	11.85	12.24
	3H	2.25	3.09	2.66	3.50	3.90	10.64	11.49	11.05	11.89	12.30
	4H	3.61	4.37	4.05	4.79	5.23	10.77	11.52	11.20	11.94	12.39
	6H	4.74	5.39	5.20	5.84	6.30	10.98	11.64	11.45	12.08	12.55
	8H	5.25	5.86	5.72	6.31	6.78	11.11	11.72	11.58	12.17	12.64
	12H	5.72	6.26	6.20	6.74	7.22	11.27	11.81	11.76	12.30	12.77
8H	4H	4.52	5.13	4.99	5.58	6.05	10.77	11.38	11.24	11.83	12.30
	6H	6.11	6.61	6.61	7.11	7.59	11.10	11.60	11.60	12.10	12.58
	8H	6.94	7.39	7.46	7.91	8.40	11.33	11.79	11.86	12.30	12.79
	12H	7.73	8.13	8.25	8.63	9.20	11.66	12.06	12.18	12.56	13.13
12H	4H	4.69	5.23	5.17	5.71	6.19	10.76	11.30	11.25	11.78	12.26
	6H	6.43	6.88	6.95	7.39	7.89	11.13	11.58	11.66	12.10	12.59
	8H	7.44	7.84	7.96	8.33	8.91	11.45	11.85	11.96	12.34	12.91