

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: P1059635

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059635
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-H340D940-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, 90 CRI LEDS
Ballast/Driver: -

Summary

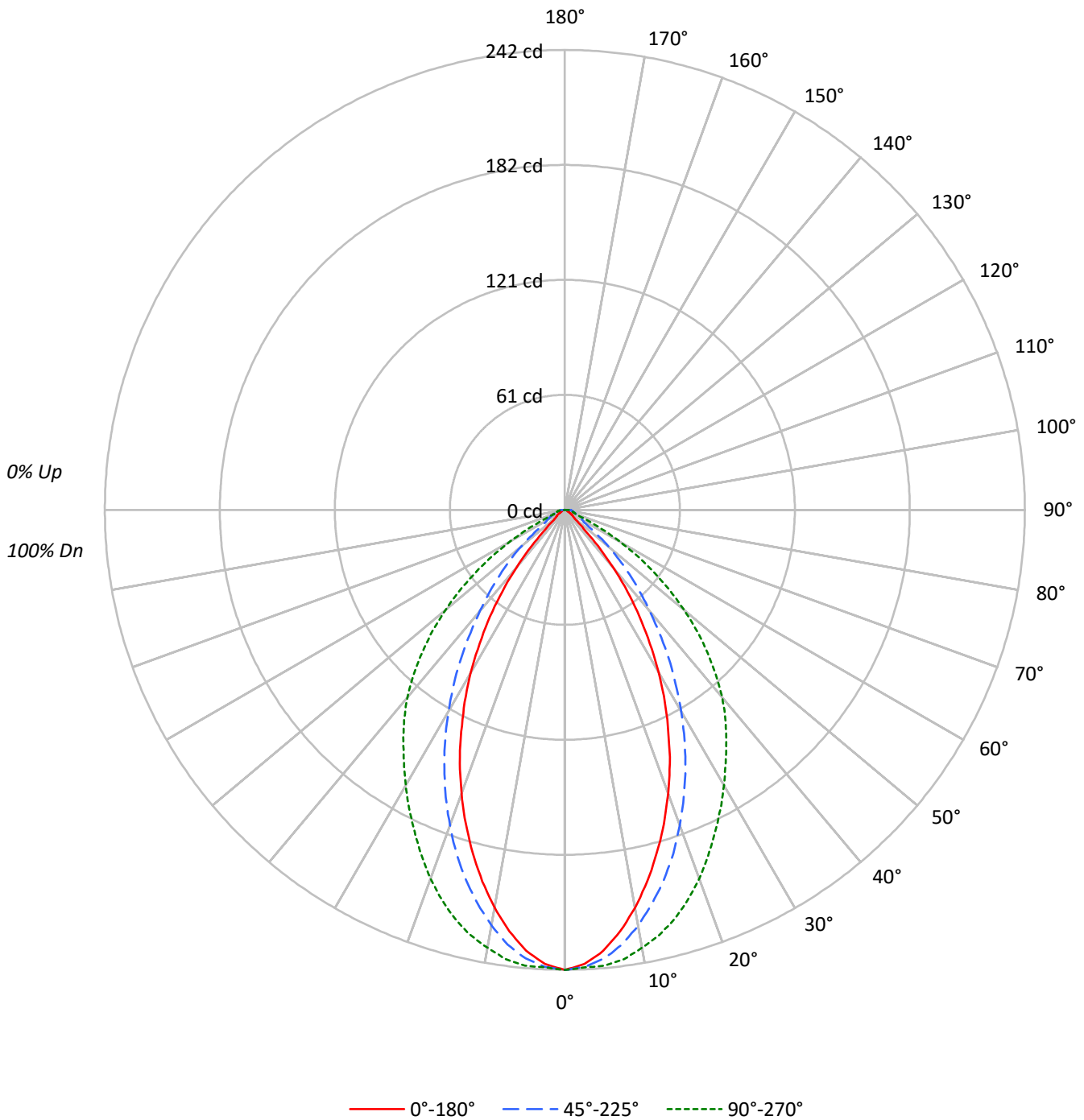
Lumens per Lamp: N/A
Luminaire Lumens: 290.9 lumens
Efficiency: N/A
Efficacy: 24.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	2843	2843	2843
5°	2745	2794	2837
10°	2534	2648	2790
15°	2273	2448	2710
20°	1984	2207	2582
25°	1669	1943	2423
30°	1341	1657	2270
35°	982	1365	2123
40°	607	1061	1974
45°	234	799	1759
50°	115	548	1489
55°	90	303	1167
60°	61	251	782
65°	53	225	350
70°	51	203	203
75°	68	218	200
80°	101	277	223
85°	148	445	296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1759 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.2	7.6
10°-20°	56.8	19.5
20°-30°	70.5	24.3
30°-40°	63.2	21.7
40°-50°	41.5	14.3
50°-60°	20.8	7.2
60°-70°	8.2	2.8
70°-80°	4.6	1.6
80°-90°	2.9	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°	149.6	51.4
0°-40°	212.8	73.2
0°-60°	275.1	94.6
0°-90°	290.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	290.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	242	242	242	242	242	
5°	233	237	237	238	241	22
15°	187	193	201	215	223	52
25°	129	137	150	171	187	59
35°	68	78	95	124	148	42
45°	14	23	48	81	106	13
55°	4	5	15	40	57	4
65°	2	5	8	10	13	2
75°	2	5	5	4	4	2
85°	1	3	3	3	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	242.1	242.1	242.1	242.1	242.1
2.5°	239.2	242.5	240.7	240.7	241.0
5°	232.9	236.6	237.0	238.4	240.7
7.5°	223.6	228.4	230.7	235.1	238.4
10°	212.5	217.7	222.1	229.9	234.0
12.5°	200.3	205.5	212.2	222.9	229.2
15°	187.0	192.9	201.4	215.1	222.9
17.5°	173.3	179.2	189.6	205.1	215.1
20°	158.8	165.5	176.6	194.4	206.6
22.5°	144.4	151.8	163.6	182.9	197.0
25°	128.8	137.0	150.0	171.1	187.0
27.5°	114.0	122.6	136.3	159.2	177.3
30°	98.9	107.4	122.2	147.0	167.4
32.5°	83.3	92.9	108.5	135.5	157.4
35°	68.5	77.8	95.2	124.4	148.1
37.5°	54.1	63.3	81.5	113.7	138.8
40°	39.6	49.2	69.2	103.3	128.8
42.5°	25.9	35.9	58.5	92.9	117.7
45°	14.1	23.3	48.1	81.1	105.9
47.5°	7.8	12.6	38.9	70.0	94.4
50°	6.3	7.0	30.0	59.6	81.5
52.5°	5.2	5.9	21.5	49.6	69.6
55°	4.4	5.2	14.8	40.0	57.0
57.5°	3.7	4.4	11.8	30.7	44.8
60°	2.6	4.4	10.7	22.6	33.3
62.5°	2.2	4.4	9.3	15.6	22.2
65°	1.9	5.2	8.1	10.4	12.6
67.5°	1.5	5.2	7.0	6.7	6.7
70°	1.5	5.2	5.9	5.6	5.9
72.5°	1.5	5.6	5.6	5.2	5.2
75°	1.5	4.8	4.8	4.4	4.4
77.5°	1.5	4.4	4.4	4.1	4.1
80°	1.5	4.1	4.1	3.7	3.3
82.5°	1.5	3.7	3.7	3.3	3.0
85°	1.1	3.3	3.3	3.3	2.2
87.5°	1.1	3.0	3.3	3.0	1.9
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	10.17	11.43	10.54	11.74	12.06
	3H	0.00	0.00	0.00	0.05	0.41	10.25	11.37	10.63	11.70	12.06
	4H	0.00	0.82	0.19	1.17	1.56	10.32	11.35	10.72	11.70	12.09
	6H	0.84	1.79	1.26	2.17	2.56	10.41	11.36	10.83	11.74	12.13
	8H	1.39	2.29	1.82	2.68	3.09	10.48	11.37	10.91	11.77	12.17
	12H	1.87	2.73	2.30	3.11	3.54	10.54	11.40	10.98	11.79	12.22
4H	2H	0.00	0.34	0.00	0.70	1.08	10.03	11.07	10.44	11.42	11.80
	3H	1.81	2.66	2.22	3.06	3.46	10.21	11.05	10.62	11.46	11.86
	4H	3.15	3.91	3.59	4.33	4.77	10.33	11.09	10.77	11.51	11.96
	6H	4.29	4.94	4.75	5.39	5.86	10.55	11.20	11.01	11.65	12.12
	8H	4.81	5.42	5.28	5.86	6.34	10.68	11.29	11.15	11.73	12.21
	12H	5.26	5.80	5.75	6.28	6.76	10.83	11.37	11.32	11.86	12.33
8H	4H	4.07	4.68	4.54	5.12	5.60	10.34	10.95	10.81	11.40	11.87
	6H	5.68	6.18	6.18	6.67	7.16	10.67	11.17	11.17	11.67	12.15
	8H	6.50	6.96	7.03	7.47	7.96	10.90	11.35	11.42	11.86	12.36
	12H	7.27	7.67	7.79	8.17	8.74	11.22	11.62	11.73	12.11	12.68
12H	4H	4.23	4.77	4.72	5.26	5.73	10.33	10.87	10.81	11.35	11.82
	6H	5.99	6.44	6.52	6.96	7.45	10.70	11.15	11.22	11.67	12.16
	8H	7.00	7.40	7.52	7.90	8.47	11.01	11.41	11.52	11.90	12.47