

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: P1059752

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059752
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-H775D840-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

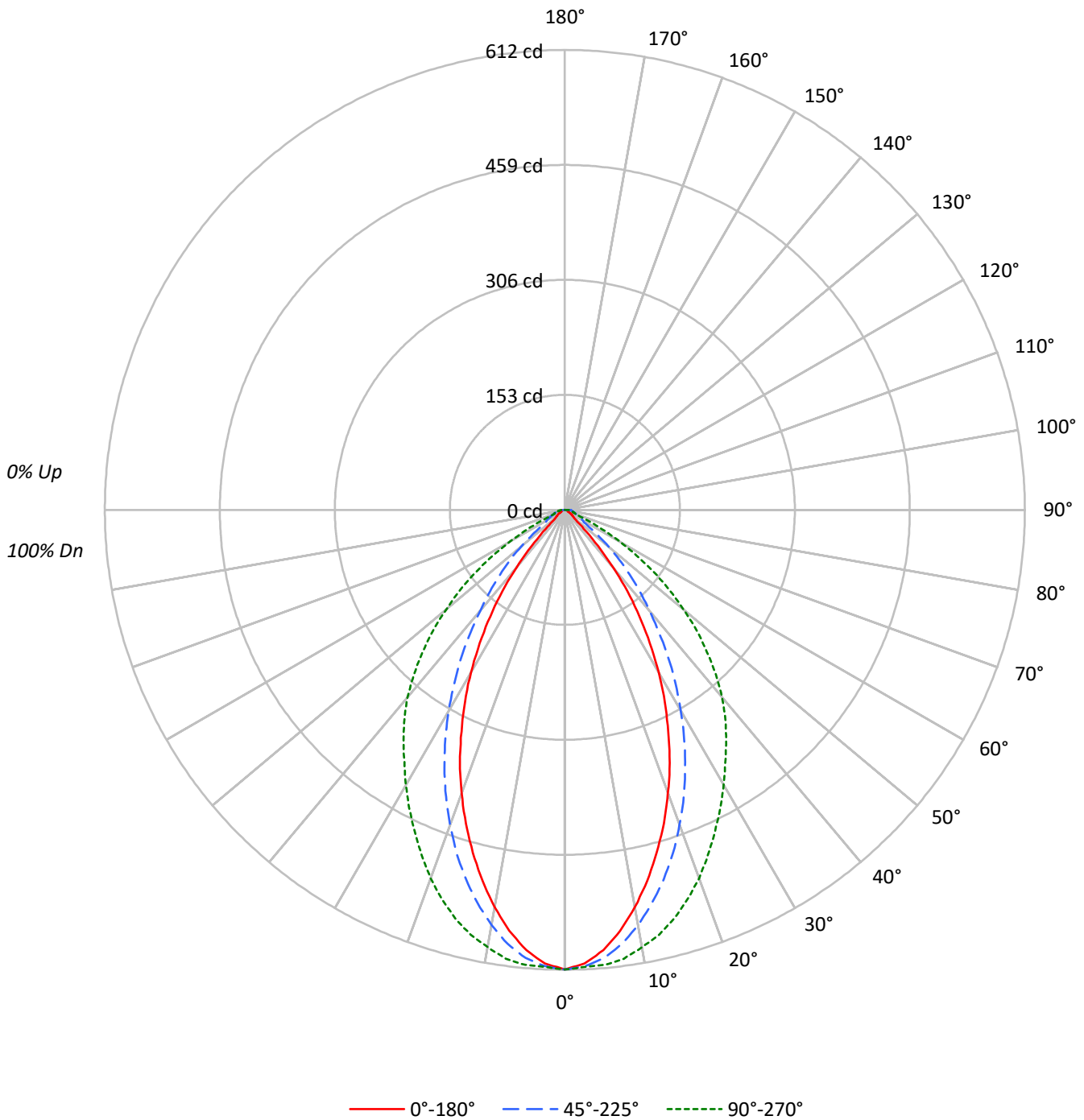
Lumens per Lamp: N/A
Luminaire Lumens: 734.6 lumens
Efficiency: N/A
Efficacy: 31.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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	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°	7182	7182	7182
5°	6933	7055	7165
10°	6401	6690	7047
15°	5742	6184	6844
20°	5013	5574	6520
25°	4216	4907	6119
30°	3386	4184	5731
35°	2480	3445	5363
40°	1534	2681	4988
45°	590	2019	4442
50°	290	1383	3758
55°	229	766	2948
60°	153	636	1977
65°	131	572	884
70°	127	515	515
75°	168	554	508
80°	250	697	568
85°	377	1132	754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4442 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.1	7.6
10°-20°	143.6	19.5
20°-30°	178.2	24.3
30°-40°	159.6	21.7
40°-50°	104.9	14.3
50°-60°	52.6	7.2
60°-70°	20.8	2.8
70°-80°	11.6	1.6
80°-90°	7.3	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°	377.8	51.4
0°-40°	537.4	73.2
0°-60°	694.9	94.6
0°-90°	734.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	734.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	612	612	612	612	612	
5°	588	598	598	602	608	54
15°	472	487	509	543	563	132
25°	325	346	379	432	472	149
35°	173	196	240	314	374	107
45°	36	59	122	205	268	34
55°	11	13	37	101	144	10
65°	5	13	21	26	32	5
75°	4	12	12	11	11	4
85°	3	8	8	8	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	611.6	611.6	611.6	611.6	611.6
2.5°	604.1	612.5	607.9	607.9	608.8
5°	588.2	597.6	598.5	602.3	607.9
7.5°	564.8	577.0	582.6	593.8	602.3
10°	536.8	549.9	561.1	580.7	591.0
12.5°	505.9	519.0	535.9	563.0	578.9
15°	472.3	487.2	508.7	543.3	563.0
17.5°	437.7	452.6	478.8	518.1	543.3
20°	401.2	418.0	446.1	491.0	521.8
22.5°	364.7	383.4	413.3	462.0	497.5
25°	325.4	346.0	378.7	432.0	472.3
27.5°	288.0	309.5	344.1	402.1	447.9
30°	249.7	271.2	308.6	371.3	422.7
32.5°	210.4	234.7	274.0	342.3	397.4
35°	173.0	196.4	240.3	314.2	374.1
37.5°	136.5	159.9	205.7	287.1	350.7
40°	100.1	124.4	174.9	260.9	325.4
42.5°	65.5	90.7	147.8	234.7	297.4
45°	35.5	58.9	121.6	204.8	267.5
47.5°	19.6	31.8	98.2	176.7	238.5
50°	15.9	17.8	75.7	150.6	205.7
52.5°	13.1	15.0	54.2	125.3	175.8
55°	11.2	13.1	37.4	101.0	144.0
57.5°	9.4	11.2	29.9	77.6	113.2
60°	6.5	11.2	27.1	57.0	84.2
62.5°	5.6	11.2	23.4	39.3	56.1
65°	4.7	13.1	20.6	26.2	31.8
67.5°	3.7	13.1	17.8	16.8	16.8
70°	3.7	13.1	15.0	14.0	15.0
72.5°	3.7	14.0	14.0	13.1	13.1
75°	3.7	12.2	12.2	11.2	11.2
77.5°	3.7	11.2	11.2	10.3	10.3
80°	3.7	10.3	10.3	9.4	8.4
82.5°	3.7	9.4	9.4	8.4	7.5
85°	2.8	8.4	8.4	8.4	5.6
87.5°	2.8	7.5	8.4	7.5	4.7
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	0.56	0.00	0.87	1.19	13.40	14.65	13.76	14.97	15.28
	3H	1.82	2.93	2.20	3.26	3.63	13.47	14.59	13.85	14.92	15.28
	4H	2.99	4.02	3.39	4.37	4.76	13.54	14.57	13.94	14.92	15.31
	6H	4.03	4.98	4.44	5.35	5.75	13.64	14.59	14.05	14.96	15.35
	8H	4.57	5.47	5.00	5.86	6.26	13.70	14.60	14.13	14.99	15.39
	12H	5.05	5.91	5.48	6.29	6.72	13.77	14.63	14.20	15.01	15.44
4H	2H	2.57	3.61	2.98	3.96	4.34	13.26	14.29	13.66	14.64	15.03
	3H	5.03	5.88	5.44	6.28	6.68	13.43	14.28	13.84	14.68	15.08
	4H	6.38	7.14	6.81	7.56	8.00	13.56	14.31	13.99	14.73	15.18
	6H	7.50	8.16	7.97	8.61	9.07	13.77	14.43	14.24	14.87	15.34
	8H	8.01	8.62	8.48	9.07	9.54	13.90	14.51	14.37	14.96	15.43
	12H	8.47	9.01	8.96	9.49	9.97	14.06	14.60	14.55	15.08	15.56
8H	4H	7.29	7.91	7.76	8.35	8.82	13.56	14.17	14.03	14.62	15.09
	6H	8.89	9.39	9.40	9.89	10.37	13.89	14.39	14.40	14.89	15.37
	8H	9.72	10.17	10.24	10.69	11.18	14.12	14.57	14.64	15.09	15.58
	12H	10.50	10.90	11.01	11.39	11.97	14.44	14.84	14.96	15.34	15.91
12H	4H	7.46	8.00	7.95	8.49	8.96	13.55	14.09	14.04	14.57	15.05
	6H	9.21	9.66	9.73	10.18	10.67	13.92	14.37	14.45	14.89	15.38
	8H	10.22	10.62	10.74	11.12	11.69	14.23	14.63	14.75	15.13	15.70