

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: P1059428

Luminaire Tested: S123RDR-H1000D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059428
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-H1000D840-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

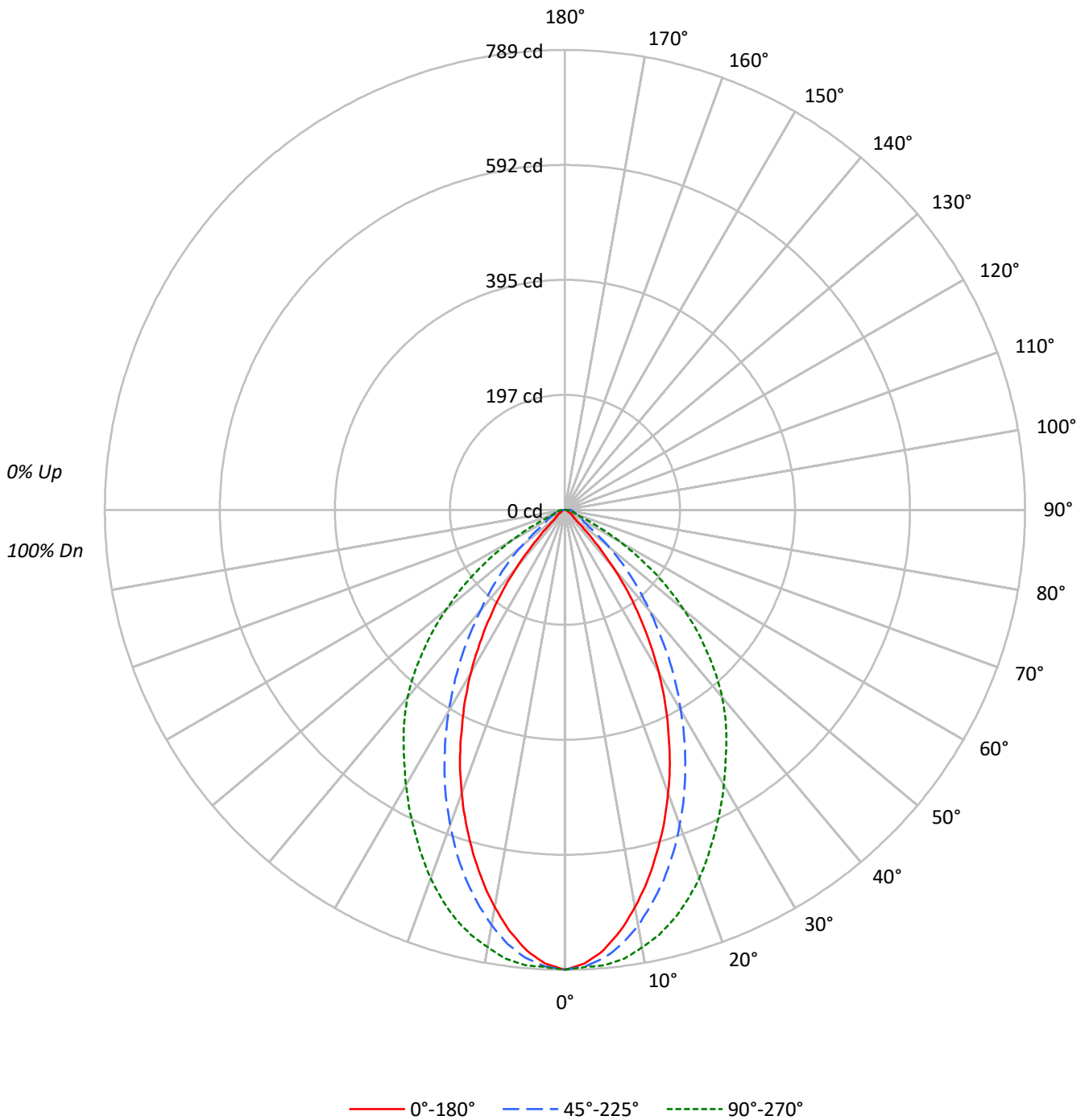
Lumens per Lamp: N/A
Luminaire Lumens: 947.5 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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°	9261	9261	9261
5°	8942	9099	9240
10°	8255	8628	9088
15°	7403	7976	8826
20°	6465	7189	8410
25°	5438	6328	7890
30°	4366	5396	7391
35°	3198	4444	6915
40°	1977	3457	6433
45°	761	2604	5728
50°	374	1785	4846
55°	297	987	3802
60°	197	822	2548
65°	167	736	1139
70°	165	663	663
75°	218	712	658
80°	325	899	737
85°	485	1469	970

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5728 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	7.6
10°-20°	185.2	19.5
20°-30°	229.8	24.3
30°-40°	205.9	21.7
40°-50°	135.3	14.3
50°-60°	67.8	7.2
60°-70°	26.8	2.8
70°-80°	15.0	1.6
80°-90°	9.4	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°	487.3	51.4
0°-40°	693.1	73.2
0°-60°	896.2	94.6
0°-90°	947.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	947.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	789	789	789	789	789	
5°	759	771	772	777	784	70
15°	609	628	656	701	726	170
25°	420	446	488	557	609	192
35°	223	253	310	405	482	138
45°	46	76	157	264	345	43
55°	14	17	48	130	186	13
65°	6	17	26	34	41	6
75°	5	16	16	14	14	5
85°	4	11	11	11	7	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	788.7	788.7	788.7	788.7	788.7
2.5°	779.1	790.0	783.9	783.9	785.1
5°	758.6	770.7	771.9	776.7	783.9
7.5°	728.4	744.1	751.4	765.8	776.7
10°	692.3	709.1	723.6	748.9	762.2
12.5°	652.5	669.3	691.1	726.0	746.5
15°	609.0	628.3	656.1	700.7	726.0
17.5°	564.4	583.7	617.5	668.1	700.7
20°	517.4	539.1	575.3	633.2	673.0
22.5°	470.4	494.5	533.1	595.8	641.6
25°	419.7	446.2	488.4	557.2	609.0
27.5°	371.5	399.2	443.8	518.6	577.7
30°	322.0	349.7	398.0	478.8	545.1
32.5°	271.4	302.7	353.4	441.4	512.6
35°	223.1	253.3	310.0	405.2	482.4
37.5°	176.1	206.2	265.3	370.3	452.3
40°	129.0	160.4	225.5	336.5	419.7
42.5°	84.4	117.0	190.6	302.7	383.5
45°	45.8	76.0	156.8	264.1	344.9
47.5°	25.3	41.0	126.6	227.9	307.5
50°	20.5	22.9	97.7	194.2	265.3
52.5°	16.9	19.3	69.9	161.6	226.7
55°	14.5	16.9	48.2	130.3	185.7
57.5°	12.1	14.5	38.6	100.1	145.9
60°	8.4	14.5	35.0	73.6	108.5
62.5°	7.2	14.5	30.2	50.7	72.4
65°	6.0	16.9	26.5	33.8	41.0
67.5°	4.8	16.9	22.9	21.7	21.7
70°	4.8	16.9	19.3	18.1	19.3
72.5°	4.8	18.1	18.1	16.9	16.9
75°	4.8	15.7	15.7	14.5	14.5
77.5°	4.8	14.5	14.5	13.3	13.3
80°	4.8	13.3	13.3	12.1	10.9
82.5°	4.8	12.1	12.1	10.9	9.6
85°	3.6	10.9	10.9	10.9	7.2
87.5°	3.6	9.6	10.9	9.6	6.0
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	0.21	1.46	0.57	1.78	2.09	14.28	15.54	14.64	15.85	16.16
	3H	2.72	3.83	3.10	4.16	4.53	14.36	15.47	14.74	15.80	16.17
	4H	3.88	4.92	4.29	5.27	5.65	14.42	15.46	14.83	15.81	16.19
	6H	4.93	5.88	5.35	6.25	6.65	14.52	15.47	14.94	15.84	16.24
	8H	5.47	6.37	5.90	6.76	7.17	14.58	15.48	15.01	15.87	16.28
	12H	5.95	6.81	6.38	7.19	7.62	14.65	15.51	15.08	15.89	16.32
4H	2H	3.45	4.49	3.86	4.84	5.22	14.14	15.17	14.54	15.53	15.91
	3H	5.92	6.76	6.33	7.17	7.57	14.31	15.16	14.73	15.56	15.97
	4H	7.26	8.02	7.70	8.44	8.88	14.44	15.20	14.88	15.62	16.06
	6H	8.40	9.05	8.86	9.50	9.96	14.66	15.31	15.12	15.76	16.23
	8H	8.90	9.52	9.37	9.96	10.44	14.78	15.40	15.25	15.84	16.31
	12H	9.36	9.90	9.85	10.38	10.86	14.94	15.48	15.43	15.97	16.44
8H	4H	8.18	8.79	8.65	9.24	9.71	14.45	15.06	14.92	15.50	15.98
	6H	9.78	10.28	10.29	10.78	11.26	14.78	15.28	15.28	15.78	16.26
	8H	10.61	11.06	11.13	11.58	12.07	15.01	15.46	15.53	15.97	16.47
	12H	11.39	11.79	11.91	12.29	12.86	15.33	15.73	15.85	16.23	16.80
12H	4H	8.35	8.89	8.84	9.37	9.85	14.44	14.97	14.92	15.46	15.93
	6H	10.10	10.55	10.62	11.07	11.56	14.81	15.26	15.33	15.78	16.27
	8H	11.11	11.51	11.63	12.01	12.58	15.12	15.52	15.64	16.01	16.59