

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: P1059797

Luminaire Tested: S123RDR-H775D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059797
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-H775D940-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

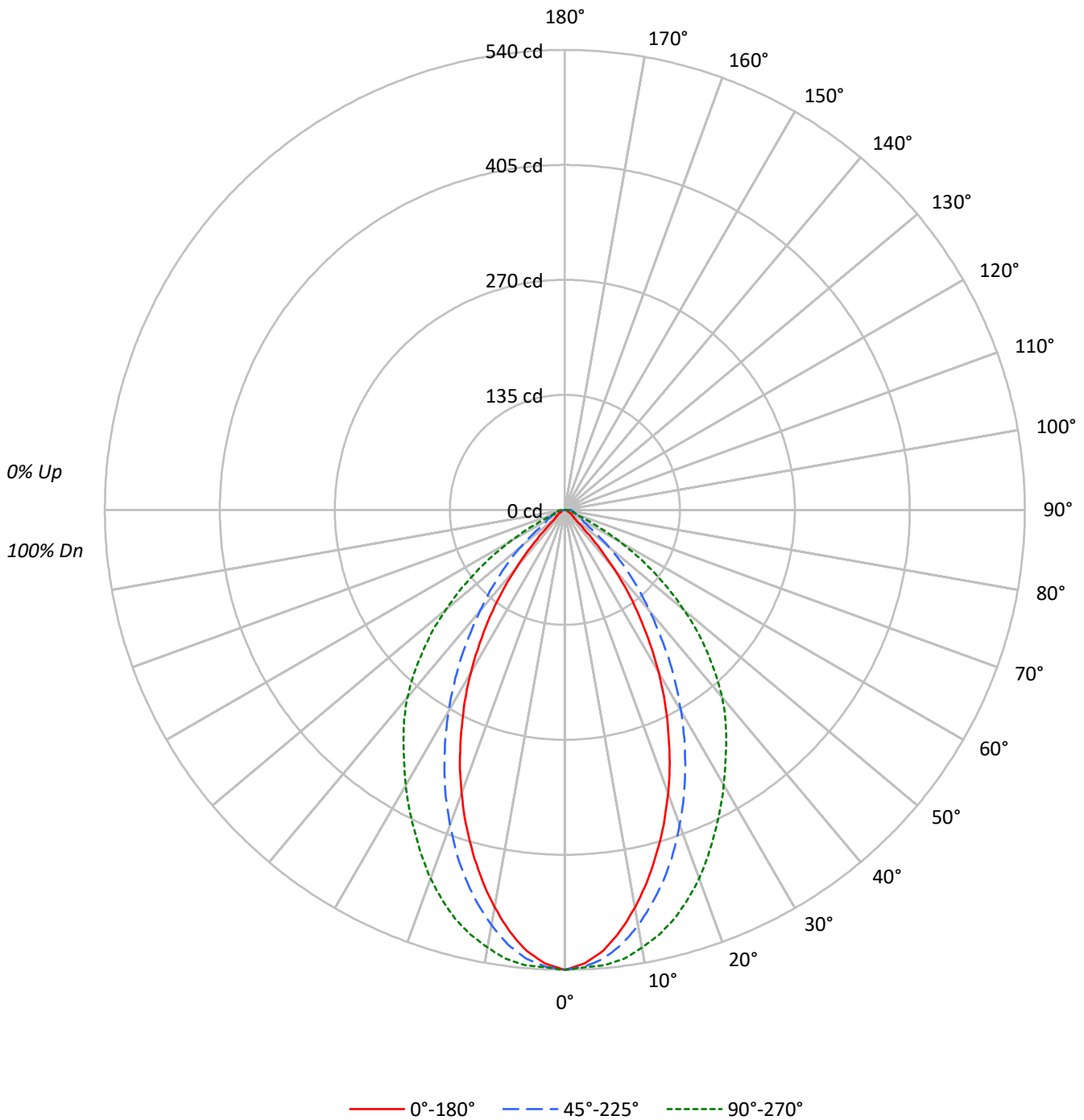
Lumens per Lamp: N/A
Luminaire Lumens: 648.7 lumens
Efficiency: N/A
Efficacy: 27.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059797

CATALOG NUMBER: S123RDR-H775D940-X4F0-XX-UDD-BVL-S

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°	6341	6341	6341
5°	6122	6230	6326
10°	5652	5908	6223
15°	5069	5461	6043
20°	4426	4922	5758
25°	3724	4333	5403
30°	2990	3695	5060
35°	2190	3042	4735
40°	1355	2367	4405
45°	521	1782	3922
50°	256	1222	3319
55°	203	676	2604
60°	136	561	1745
65°	114	506	781
70°	113	453	453
75°	150	485	449
80°	223	615	500
85°	337	997	674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3922 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	7.6
10°-20°	126.8	19.5
20°-30°	157.3	24.3
30°-40°	141.0	21.7
40°-50°	92.7	14.3
50°-60°	46.4	7.2
60°-70°	18.3	2.8
70°-80°	10.3	1.6
80°-90°	6.5	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°	333.6	51.4
0°-40°	474.6	73.2
0°-60°	613.7	94.6
0°-90°	648.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	648.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	519	528	528	532	537	48
15°	417	430	449	480	497	116
25°	287	306	334	382	417	131
35°	153	173	212	278	330	95
45°	31	52	107	181	236	30
55°	10	12	33	89	127	9
65°	4	12	18	23	28	4
75°	3	11	11	10	10	3
85°	2	7	7	7	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	540.0	540.0	540.0	540.0	540.0
2.5°	533.4	540.9	536.7	536.7	537.6
5°	519.4	527.7	528.5	531.8	536.7
7.5°	498.8	509.5	514.4	524.4	531.8
10°	474.0	485.5	495.5	512.8	521.9
12.5°	446.7	458.3	473.2	497.1	511.1
15°	417.0	430.2	449.2	479.8	497.1
17.5°	386.5	399.7	422.8	457.5	479.8
20°	354.2	369.1	393.9	433.5	460.8
22.5°	322.0	338.6	365.0	407.9	439.3
25°	287.4	305.5	334.4	381.5	417.0
27.5°	254.3	273.3	303.9	355.1	395.5
30°	220.5	239.5	272.5	327.8	373.2
32.5°	185.8	207.3	241.9	302.2	350.9
35°	152.8	173.4	212.2	277.5	330.3
37.5°	120.6	141.2	181.7	253.5	309.7
40°	88.4	109.8	154.4	230.4	287.4
42.5°	57.8	80.1	130.5	207.3	262.6
45°	31.4	52.0	107.3	180.8	236.2
47.5°	17.3	28.1	86.7	156.1	210.6
50°	14.0	15.7	66.9	132.9	181.7
52.5°	11.6	13.2	47.9	110.7	155.2
55°	9.9	11.6	33.0	89.2	127.2
57.5°	8.3	9.9	26.4	68.5	99.9
60°	5.8	9.9	23.9	50.4	74.3
62.5°	5.0	9.9	20.6	34.7	49.5
65°	4.1	11.6	18.2	23.1	28.1
67.5°	3.3	11.6	15.7	14.9	14.9
70°	3.3	11.6	13.2	12.4	13.2
72.5°	3.3	12.4	12.4	11.6	11.6
75°	3.3	10.7	10.7	9.9	9.9
77.5°	3.3	9.9	9.9	9.1	9.1
80°	3.3	9.1	9.1	8.3	7.4
82.5°	3.3	8.3	8.3	7.4	6.6
85°	2.5	7.4	7.4	7.4	5.0
87.5°	2.5	6.6	7.4	6.6	4.1
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	0.13	0.00	0.45	0.76	12.96	14.22	13.33	14.53	14.85
	3H	1.41	2.52	1.79	2.85	3.22	13.04	14.15	13.42	14.48	14.85
	4H	2.57	3.60	2.97	3.96	4.34	13.10	14.14	13.51	14.49	14.88
	6H	3.62	4.57	4.03	4.94	5.34	13.20	14.15	13.62	14.52	14.92
	8H	4.16	5.06	4.59	5.45	5.86	13.26	14.16	13.69	14.55	14.96
	12H	4.64	5.50	5.08	5.89	6.32	13.33	14.19	13.77	14.58	15.01
4H	2H	2.14	3.18	2.55	3.53	3.91	12.82	13.86	13.23	14.21	14.59
	3H	4.61	5.45	5.02	5.86	6.26	13.00	13.84	13.41	14.25	14.65
	4H	5.94	6.70	6.38	7.12	7.57	13.12	13.88	13.56	14.30	14.75
	6H	7.08	7.73	7.54	8.18	8.65	13.34	13.99	13.81	14.44	14.91
	8H	7.59	8.20	8.06	8.65	9.12	13.46	14.08	13.94	14.52	15.00
	12H	8.05	8.59	8.53	9.07	9.54	13.63	14.17	14.11	14.65	15.12
8H	4H	6.86	7.47	7.33	7.92	8.39	13.13	13.74	13.60	14.19	14.66
	6H	8.46	8.96	8.97	9.46	9.94	13.46	13.96	13.96	14.46	14.94
	8H	9.29	9.74	9.82	10.26	10.75	13.69	14.14	14.21	14.65	15.15
	12H	10.07	10.47	10.59	10.97	11.54	14.01	14.41	14.53	14.91	15.48
12H	4H	7.03	7.57	7.52	8.05	8.53	13.12	13.66	13.60	14.14	14.62
	6H	8.78	9.23	9.30	9.75	10.24	13.49	13.94	14.01	14.46	14.95
	8H	9.79	10.19	10.31	10.69	11.26	13.80	14.20	14.31	14.69	15.27