

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: P1059596

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059596
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

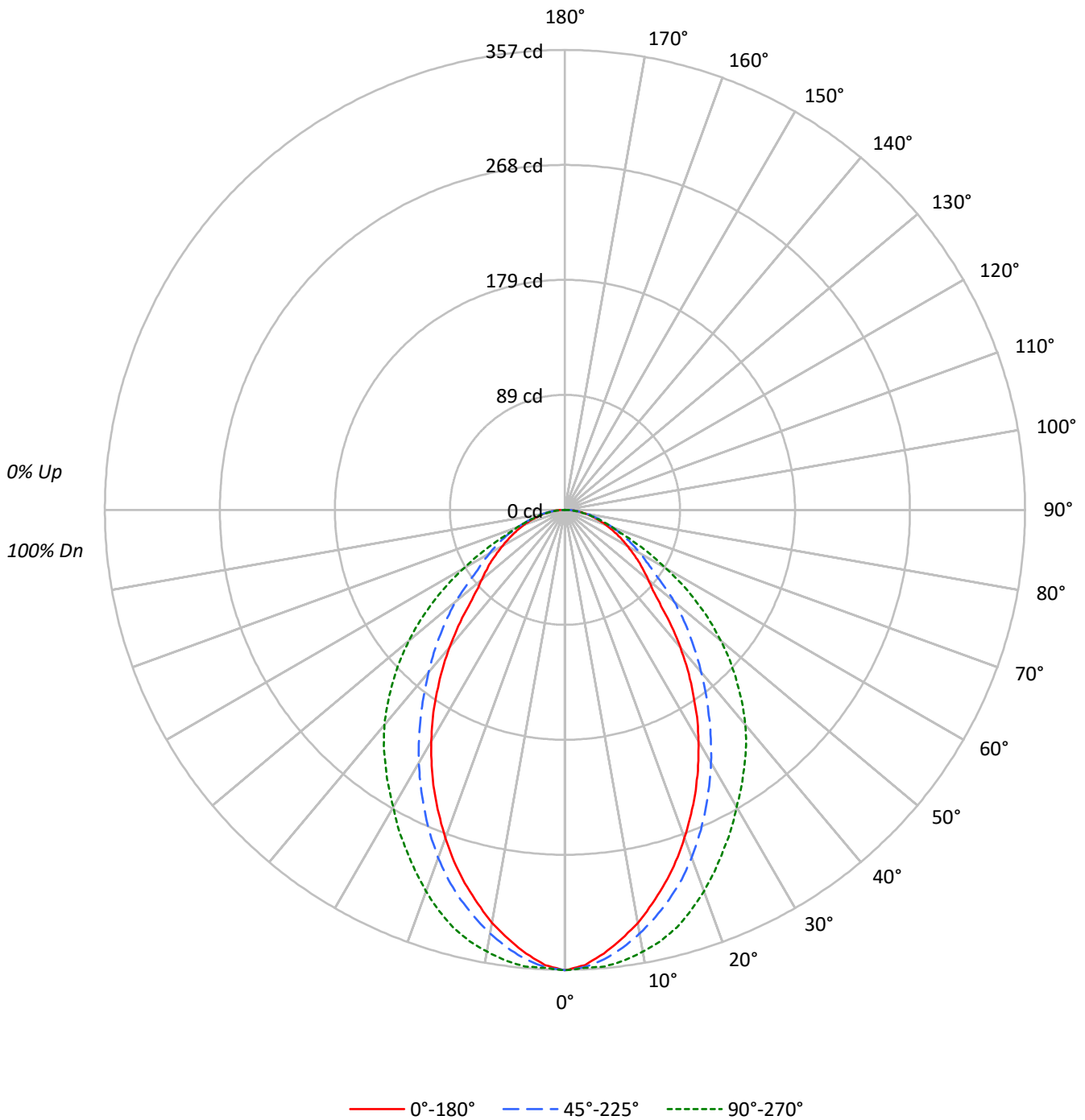
Lumens per Lamp: N/A
Luminaire Lumens: 645.7 lumens
Efficiency: N/A
Efficacy: 55.2 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4197	4197	4197
5°	4075	4129	4194
10°	3882	3982	4152
15°	3647	3805	4080
20°	3388	3593	3938
25°	3111	3339	3773
30°	2812	3074	3613
35°	2481	2792	3478
40°	2132	2518	3340
45°	1754	2268	3132
50°	1538	2020	2886
55°	1425	1724	2557
60°	1308	1585	2116
65°	1223	1456	1664
70°	1150	1325	1325
75°	1084	1216	1139
80°	1021	1102	960
85°	957	1078	728

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3132 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	5.1
10°-20°	88.6	13.7
20°-30°	120.1	18.6
30°-40°	125.6	19.5
40°-50°	108.9	16.9
50°-60°	81.0	12.5
60°-70°	52.0	8.1
70°-80°	27.9	4.3
80°-90°	8.4	1.3
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°	241.8	37.4
0°-40°	367.4	56.9
0°-60°	557.3	86.3
0°-90°	645.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	645.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	357	357	357	357	357	
5°	346	352	350	353	356	32
15°	300	307	313	326	336	84
25°	240	248	258	275	291	110
35°	173	181	195	220	243	108
45°	106	114	137	166	189	83
55°	70	71	84	108	125	62
65°	44	48	52	56	60	44
75°	24	28	27	26	25	25
85°	7	9	8	7	5	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	357.4	357.4	357.4	357.4	357.4
2.5°	353.7	358.7	355.3	355.3	355.8
5°	345.7	351.6	350.3	352.8	355.8
7.5°	336.1	342.3	342.8	348.6	352.8
10°	325.6	331.9	334.0	342.3	348.2
12.5°	313.0	320.1	323.9	334.4	342.8
15°	300.0	307.1	313.0	325.6	335.6
17.5°	286.2	293.3	300.9	315.1	326.0
20°	271.1	278.7	287.5	301.7	315.1
22.5°	255.6	263.6	272.8	288.3	303.4
25°	240.1	247.6	257.7	274.9	291.2
27.5°	223.8	231.7	242.2	261.1	279.5
30°	207.4	215.4	226.7	246.8	266.5
32.5°	190.7	198.6	210.8	233.4	254.8
35°	173.1	181.4	194.8	219.6	242.6
37.5°	156.3	164.3	179.3	206.6	230.9
40°	139.1	147.5	164.3	193.6	217.9
42.5°	122.4	130.7	150.4	179.8	203.6
45°	105.6	113.6	136.6	165.9	188.6
47.5°	92.6	98.5	123.6	151.3	173.9
50°	84.2	86.3	110.6	137.0	158.0
52.5°	76.7	78.4	96.4	122.8	141.6
55°	69.6	71.2	84.2	108.1	124.9
57.5°	62.4	64.5	75.0	93.0	108.1
60°	55.7	58.2	67.5	79.6	90.1
62.5°	49.9	52.8	59.9	67.5	74.6
65°	44.0	47.8	52.4	55.7	59.9
67.5°	38.6	42.7	45.3	46.1	46.5
70°	33.5	37.7	38.6	38.6	38.6
72.5°	28.5	33.1	32.3	31.8	31.4
75°	23.9	27.7	26.8	25.6	25.1
77.5°	19.3	22.6	21.4	20.5	19.3
80°	15.1	17.6	16.3	15.5	14.2
82.5°	11.3	13.0	11.7	10.9	9.6
85°	7.1	8.8	8.0	6.7	5.4
87.5°	3.8	5.0	4.2	3.8	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	11.77	13.25	12.13	13.56	13.88	14.52	16.01	14.89	16.32	16.64
	3H	13.48	14.81	13.86	15.13	15.50	15.55	16.87	15.92	17.20	17.57
	4H	14.14	15.38	14.54	15.73	16.11	15.91	17.16	16.31	17.51	17.88
	6H	14.64	15.79	15.05	16.16	16.55	16.17	17.31	16.58	17.68	18.07
	8H	14.82	15.91	15.25	16.30	16.70	16.24	17.33	16.66	17.72	18.12
	12H	14.95	15.99	15.38	16.37	16.80	16.27	17.32	16.70	17.70	18.13
4H	2H	12.54	13.79	12.94	14.14	14.52	14.80	16.04	15.20	16.39	16.77
	3H	14.47	15.50	14.88	15.90	16.30	16.05	17.08	16.46	17.48	17.89
	4H	15.28	16.21	15.71	16.63	17.07	16.54	17.47	16.97	17.88	18.32
	6H	15.92	16.73	16.38	17.17	17.63	16.92	17.73	17.38	18.17	18.63
	8H	16.15	16.91	16.61	17.35	17.82	17.03	17.78	17.49	18.23	18.70
	12H	16.32	17.00	16.81	17.48	17.95	17.10	17.77	17.58	18.25	18.72
8H	4H	15.60	16.36	16.07	16.80	17.27	16.73	17.48	17.19	17.93	18.40
	6H	16.39	17.02	16.89	17.51	17.99	17.22	17.84	17.71	18.33	18.81
	8H	16.72	17.28	17.24	17.79	18.28	17.39	17.95	17.91	18.46	18.95
	12H	17.00	17.49	17.51	17.99	18.55	17.52	18.02	18.03	18.51	19.08
12H	4H	15.63	16.30	16.11	16.78	17.25	16.74	17.42	17.23	17.90	18.37
	6H	16.45	17.01	16.96	17.52	18.01	17.25	17.81	17.77	18.32	18.81
	8H	16.84	17.34	17.35	17.83	18.39	17.48	17.98	17.99	18.47	19.04