

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: P1059606

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059606
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D850-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

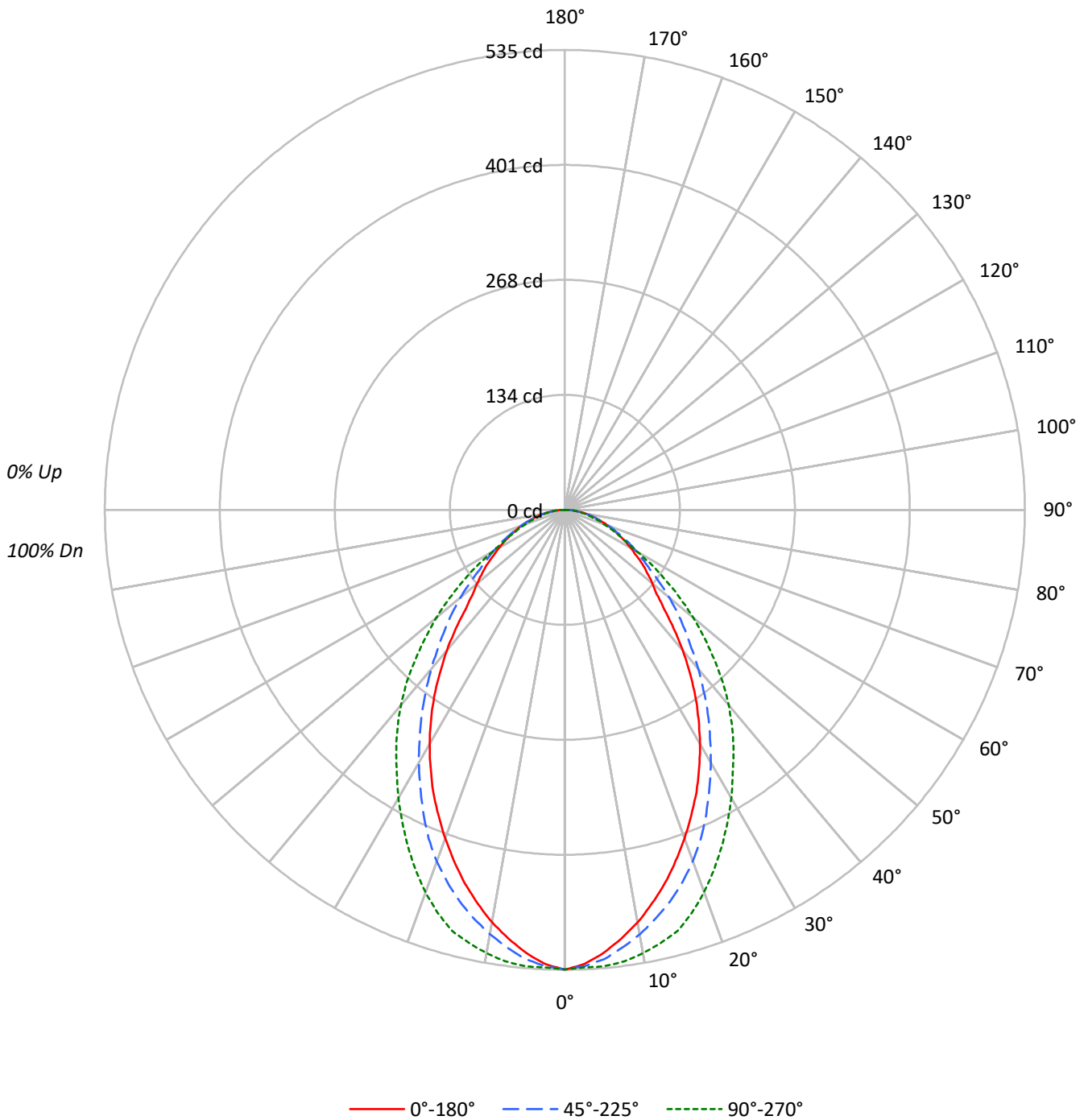
Lumens per Lamp: N/A
Luminaire Lumens: 939.6 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6279	6279	6279
5°	6098	6184	6281
10°	5810	5976	6244
15°	5466	5734	6165
20°	5083	5440	5917
25°	4693	5044	5593
30°	4262	4605	5247
35°	3793	4156	4901
40°	3273	3703	4543
45°	2705	3278	4074
50°	2430	2892	3557
55°	2252	2469	2948
60°	2076	2248	2259
65°	1931	2034	1892
70°	1816	1847	1658
75°	1710	1651	1461
80°	1616	1494	1366
85°	1549	1671	1549

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4074 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	5.3
10°-20°	133.4	14.2
20°-30°	180.5	19.2
30°-40°	185.5	19.7
40°-50°	155.8	16.6
50°-60°	111.7	11.9
60°-70°	71.1	7.6
70°-80°	39.1	4.2
80°-90°	13.0	1.4
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°	363.5	38.7
0°-40°	549.0	58.4
0°-60°	816.4	86.9
0°-90°	939.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	939.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	535	535	535	535	535	
5°	517	526	525	528	533	48
15°	450	462	472	492	507	126
25°	362	376	389	410	432	166
35°	265	279	290	316	342	165
45°	163	177	197	226	245	129
55°	110	112	121	137	144	98
65°	70	74	73	69	68	69
75°	38	41	36	34	32	40
85°	12	12	12	13	12	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	534.7	534.7	534.7	534.7	534.7
2.5°	528.8	536.1	531.1	531.5	532.9
5°	517.3	526.5	524.6	528.3	532.9
7.5°	503.0	513.1	513.6	522.3	529.7
10°	487.3	497.9	501.2	514.5	523.7
12.5°	468.9	480.4	487.3	503.9	515.9
15°	449.6	462.0	471.7	491.9	507.1
17.5°	428.4	441.8	454.2	475.8	491.5
20°	406.8	421.1	435.3	455.6	473.5
22.5°	384.3	399.0	413.7	433.5	453.3
25°	362.2	376.0	389.3	410.5	431.7
27.5°	338.2	352.5	364.0	387.5	409.6
30°	314.3	328.6	339.6	364.0	387.0
32.5°	289.5	304.2	314.3	339.6	363.6
35°	264.6	278.9	289.9	315.7	341.9
37.5°	238.4	254.0	265.1	294.1	319.8
40°	213.5	228.3	241.6	272.0	296.4
42.5°	187.8	202.9	218.1	249.4	272.0
45°	162.9	177.2	197.4	226.0	245.3
47.5°	145.0	154.2	177.6	201.6	220.0
50°	133.0	136.7	158.3	179.5	194.7
52.5°	121.0	123.8	138.5	157.8	169.4
55°	110.0	112.3	120.6	136.7	144.0
57.5°	98.0	100.3	107.2	116.4	120.6
60°	88.4	90.2	95.7	97.1	96.2
62.5°	78.7	81.5	84.2	81.0	79.6
65°	69.5	73.6	73.2	69.0	68.1
67.5°	61.2	65.3	63.0	58.9	57.5
70°	52.9	57.1	53.8	49.7	48.3
72.5°	45.1	49.7	44.6	41.0	40.0
75°	37.7	41.4	36.4	33.6	32.2
77.5°	30.8	33.6	29.0	26.7	25.8
80°	23.9	25.8	22.1	20.7	20.2
82.5°	17.5	18.4	16.1	17.0	16.6
85°	11.5	12.0	12.4	12.9	11.5
87.5°	5.5	7.8	7.8	7.4	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	13.57	15.03	13.93	15.34	15.66	14.64	16.10	15.00	16.41	16.73
	3H	15.26	16.57	15.64	16.90	17.27	15.72	17.03	16.10	17.36	17.72
	4H	15.92	17.15	16.32	17.49	17.87	16.12	17.35	16.52	17.70	18.08
	6H	16.42	17.55	16.83	17.92	18.31	16.43	17.57	16.85	17.93	18.33
	8H	16.59	17.67	17.02	18.06	18.46	16.57	17.65	16.99	18.04	18.44
	12H	16.72	17.75	17.15	18.13	18.56	16.69	17.72	17.12	18.10	18.53
4H	2H	14.17	15.40	14.57	15.75	16.13	15.04	16.27	15.44	16.62	17.00
	3H	16.10	17.11	16.51	17.52	17.92	16.36	17.38	16.77	17.78	18.18
	4H	16.91	17.82	17.34	18.24	18.68	16.88	17.79	17.31	18.21	18.65
	6H	17.56	18.35	18.01	18.80	19.26	17.31	18.11	17.77	18.55	19.01
	8H	17.78	18.52	18.24	18.97	19.43	17.50	18.24	17.96	18.69	19.16
	12H	17.95	18.61	18.43	19.09	19.57	17.68	18.35	18.17	18.83	19.30
8H	4H	17.14	17.89	17.61	18.33	18.80	17.12	17.87	17.59	18.31	18.78
	6H	17.93	18.55	18.43	19.04	19.52	17.67	18.29	18.17	18.78	19.26
	8H	18.25	18.80	18.76	19.31	19.80	17.95	18.50	18.46	19.01	19.50
	12H	18.52	19.00	19.03	19.50	20.06	18.24	18.73	18.75	19.22	19.79
12H	4H	17.16	17.82	17.64	18.30	18.77	17.15	17.81	17.63	18.29	18.77
	6H	17.97	18.52	18.48	19.03	19.52	17.72	18.28	18.24	18.79	19.28
	8H	18.34	18.83	18.85	19.32	19.89	18.06	18.55	18.57	19.05	19.61