

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: P1059605

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059605
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-H340D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

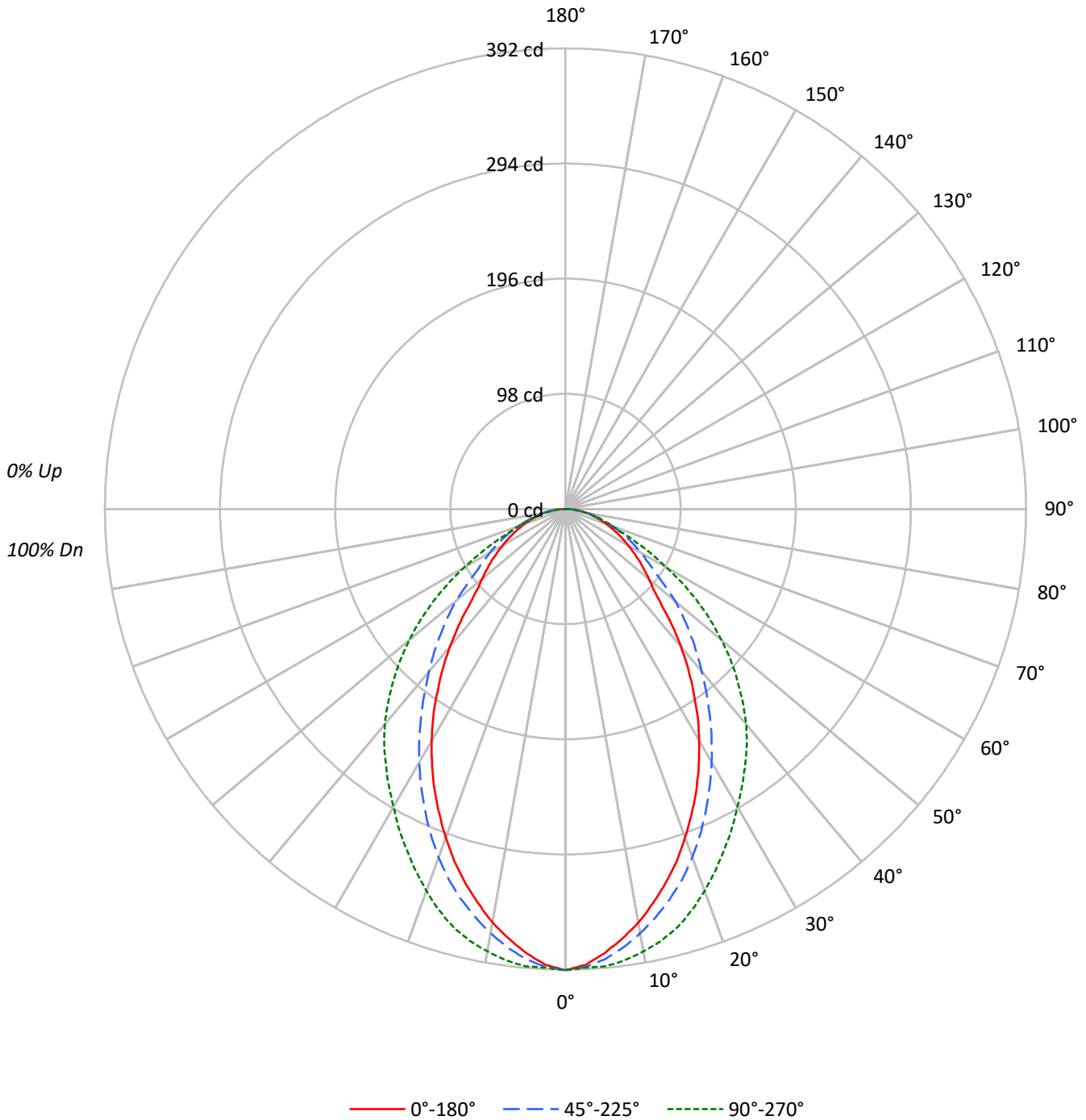
Lumens per Lamp: N/A
Luminaire Lumens: 709.0 lumens
Efficiency: N/A
Efficacy: 60.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	4609	4609	4609
5°	4474	4535	4605
10°	4263	4372	4560
15°	4006	4178	4481
20°	3720	3945	4324
25°	3417	3667	4143
30°	3089	3375	3969
35°	2724	3068	3819
40°	2342	2765	3668
45°	1926	2491	3439
50°	1690	2220	3169
55°	1564	1894	2807
60°	1437	1740	2323
65°	1342	1598	1828
70°	1263	1452	1452
75°	1189	1338	1252
80°	1123	1210	1055
85°	1051	1172	808

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3439 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.3	5.1
10°-20°	97.3	13.7
20°-30°	131.9	18.6
30°-40°	137.9	19.5
40°-50°	119.6	16.9
50°-60°	89.0	12.6
60°-70°	57.1	8.1
70°-80°	30.6	4.3
80°-90°	9.2	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°	265.5	37.4
0°-40°	403.4	56.9
0°-60°	612.1	86.3
0°-90°	709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	392	392	392	392	392	
5°	380	386	385	388	391	36
15°	330	337	344	358	369	92
25°	264	272	283	302	320	121
35°	190	199	214	241	266	119
45°	116	125	150	182	207	91
55°	76	78	92	119	137	68
65°	48	52	58	61	66	48
75°	26	30	30	28	28	28
85°	8	10	9	7	6	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	392.5	392.5	392.5	392.5	392.5
2.5°	388.4	393.9	390.2	390.2	390.7
5°	379.6	386.1	384.7	387.5	390.7
7.5°	369.0	376.0	376.4	382.9	387.5
10°	357.5	364.4	366.7	376.0	382.4
12.5°	343.7	351.6	355.7	367.2	376.4
15°	329.5	337.3	343.7	357.5	368.6
17.5°	314.3	322.1	330.4	346.0	358.0
20°	297.7	306.0	315.7	331.3	346.0
22.5°	280.7	289.4	299.6	316.6	333.2
25°	263.7	272.0	283.0	301.9	319.8
27.5°	245.7	254.5	266.0	286.7	306.9
30°	227.8	236.5	248.9	271.0	292.7
32.5°	209.4	218.1	231.5	256.3	279.8
35°	190.0	199.2	214.0	241.1	266.4
37.5°	171.6	180.4	196.9	226.9	253.5
40°	152.8	162.0	180.4	212.6	239.3
42.5°	134.4	143.6	165.2	197.4	223.6
45°	116.0	124.7	150.0	182.2	207.1
47.5°	101.7	108.1	135.7	166.1	191.0
50°	92.5	94.8	121.5	150.5	173.5
52.5°	84.2	86.0	105.8	134.8	155.5
55°	76.4	78.2	92.5	118.7	137.1
57.5°	68.6	70.9	82.4	102.2	118.7
60°	61.2	64.0	74.1	87.4	98.9
62.5°	54.8	58.0	65.8	74.1	81.9
65°	48.3	52.5	57.5	61.2	65.8
67.5°	42.3	46.9	49.7	50.6	51.1
70°	36.8	41.4	42.3	42.3	42.3
72.5°	31.3	36.4	35.4	35.0	34.5
75°	26.2	30.4	29.5	28.1	27.6
77.5°	21.2	24.8	23.5	22.5	21.2
80°	16.6	19.3	17.9	17.0	15.6
82.5°	12.4	14.3	12.9	12.0	10.6
85°	7.8	9.7	8.7	7.4	6.0
87.5°	4.1	5.5	4.6	4.1	2.3
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	12.10	13.58	12.46	13.89	14.21	14.85	16.34	15.22	16.65	16.96
	3H	13.81	15.13	14.18	15.46	15.82	15.87	17.20	16.25	17.53	17.89
	4H	14.47	15.71	14.87	16.06	16.44	16.24	17.48	16.64	17.83	18.21
	6H	14.97	16.12	15.38	16.48	16.88	16.49	17.64	16.90	18.01	18.40
	8H	15.15	16.24	15.57	16.63	17.03	16.56	17.66	16.99	18.05	18.45
	12H	15.27	16.32	15.70	16.70	17.13	16.60	17.65	17.03	18.03	18.46
4H	2H	12.87	14.12	13.27	14.47	14.85	15.12	16.37	15.52	16.72	17.10
	3H	14.80	15.83	15.21	16.23	16.63	16.38	17.41	16.79	17.81	18.21
	4H	15.61	16.54	16.04	16.95	17.39	16.86	17.79	17.30	18.21	18.65
	6H	16.25	17.06	16.71	17.50	17.96	17.24	18.05	17.70	18.49	18.96
	8H	16.47	17.23	16.94	17.67	18.14	17.36	18.11	17.82	18.56	19.02
	12H	16.65	17.32	17.13	17.80	18.27	17.43	18.10	17.91	18.58	19.05
8H	4H	15.93	16.68	16.39	17.13	17.59	17.06	17.81	17.52	18.26	18.72
	6H	16.72	17.34	17.22	17.83	18.31	17.54	18.17	18.04	18.66	19.14
	8H	17.05	17.61	17.56	18.12	18.61	17.72	18.28	18.23	18.79	19.28
	12H	17.32	17.82	17.83	18.31	18.88	17.85	18.35	18.36	18.84	19.41
12H	4H	15.95	16.62	16.43	17.10	17.58	17.07	17.74	17.55	18.22	18.69
	6H	16.77	17.33	17.29	17.84	18.33	17.58	18.14	18.09	18.65	19.14
	8H	17.17	17.66	17.68	18.15	18.72	17.81	18.30	18.32	18.80	19.36