

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: P1059666

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059666
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D835-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

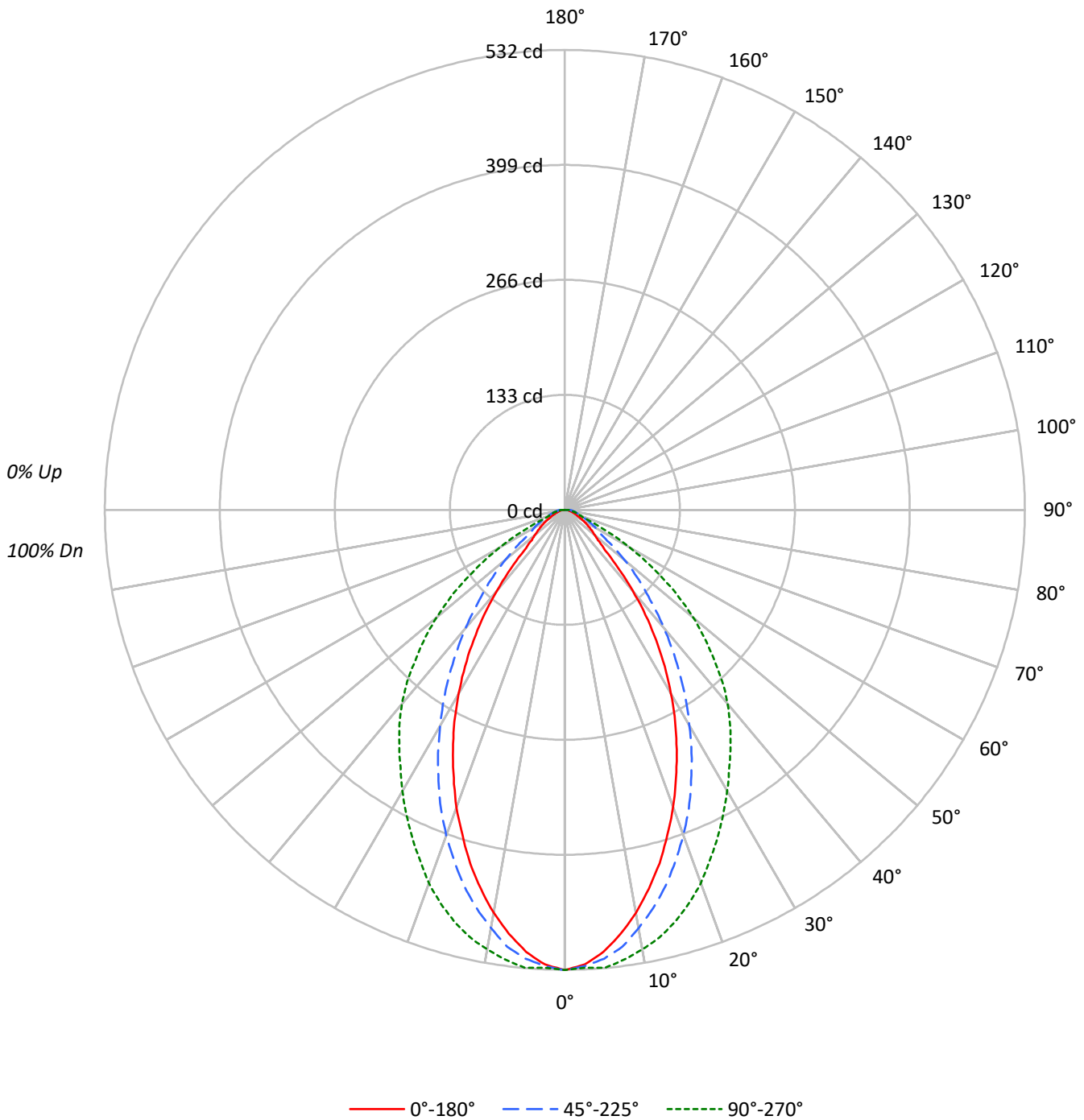
Lumens per Lamp: N/A
Luminaire Lumens: 714.6 lumens
Efficiency: N/A
Efficacy: 41.1 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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				100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6250	6250	6250
5°	6048	6142	6266
10°	5646	5858	6157
15°	5145	5474	5997
20°	4577	5007	5743
25°	3967	4480	5414
30°	3326	3909	5093
35°	2635	3327	4786
40°	1865	2736	4490
45°	1098	2164	4040
50°	822	1642	3539
55°	690	1110	2844
60°	559	946	2020
65°	442	809	1067
70°	385	704	659
75°	358	658	631
80°	358	717	629
85°	445	1064	808

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4040 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	6.9
10°-20°	127.3	17.8
20°-30°	162.1	22.7
30°-40°	152.5	21.3
40°-50°	109.8	15.4
50°-60°	63.4	8.9
60°-70°	29.0	4.1
70°-80°	14.5	2.0
80°-90°	6.9	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°	338.4	47.4
0°-40°	491.0	68.7
0°-60°	664.2	93.0
0°-90°	714.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	714.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	513	522	521	526	532	48
15°	423	438	450	475	493	118
25°	306	322	346	384	418	140
35°	184	200	232	286	334	114
45°	66	83	130	196	243	56
55°	34	35	54	103	139	30
65°	16	22	29	32	38	16
75°	8	15	14	14	14	8
85°	3	7	8	7	6	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	532.3	532.3	532.3	532.3	532.3
2.5°	526.4	533.0	528.3	529.0	530.3
5°	513.1	521.7	521.1	526.4	531.6
7.5°	494.6	504.5	509.8	517.8	525.0
10°	473.5	484.7	491.3	505.9	516.4
12.5°	449.0	463.5	472.1	491.3	506.5
15°	423.2	438.4	450.3	475.4	493.3
17.5°	394.1	410.6	425.8	455.6	477.4
20°	366.3	382.2	400.7	433.1	459.6
22.5°	335.9	353.1	374.3	408.7	438.4
25°	306.2	322.0	345.8	384.2	417.9
27.5°	276.4	292.3	317.4	359.7	396.8
30°	245.3	261.9	288.3	335.3	375.6
32.5°	214.9	230.8	260.5	311.4	353.8
35°	183.8	199.7	232.1	285.7	333.9
37.5°	153.4	169.9	204.3	264.5	314.1
40°	121.7	139.5	178.5	242.7	292.9
42.5°	91.9	111.1	152.7	220.2	269.8
45°	66.1	82.7	130.3	195.7	243.3
47.5°	51.6	60.2	109.8	170.6	218.9
50°	45.0	46.3	89.9	147.5	193.7
52.5°	39.0	40.3	70.8	125.6	167.3
55°	33.7	35.0	54.2	103.2	138.9
57.5°	28.4	30.4	45.0	82.0	111.8
60°	23.8	26.5	40.3	62.8	86.0
62.5°	19.2	23.8	34.4	46.3	61.5
65°	15.9	22.5	29.1	32.4	38.4
67.5°	13.2	20.5	24.5	23.1	22.5
70°	11.2	18.5	20.5	18.5	19.2
72.5°	9.3	17.2	17.2	15.9	15.9
75°	7.9	15.2	14.5	13.9	13.9
77.5°	6.6	13.2	12.6	11.9	11.2
80°	5.3	10.6	10.6	9.9	9.3
82.5°	4.6	8.6	8.6	8.6	7.3
85°	3.3	7.3	7.9	7.3	6.0
87.5°	2.6	6.6	6.6	6.0	4.0
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	6.33	7.65	6.70	7.97	8.28	13.70	15.02	14.07	15.33	15.65
	3H	7.72	8.89	8.10	9.22	9.59	13.93	15.10	14.31	15.43	15.80
	4H	8.27	9.36	8.68	9.72	10.10	14.05	15.14	14.45	15.49	15.87
	6H	8.71	9.71	9.12	10.08	10.48	14.16	15.16	14.58	15.53	15.93
	8H	8.88	9.83	9.31	10.23	10.63	14.21	15.16	14.64	15.55	15.96
	12H	9.04	9.95	9.47	10.33	10.76	14.27	15.18	14.71	15.56	15.99
4H	2H	7.44	8.53	7.84	8.88	9.26	13.66	14.75	14.06	15.10	15.48
	3H	9.10	9.99	9.51	10.39	10.80	14.02	14.91	14.43	15.32	15.72
	4H	9.91	10.71	10.34	11.13	11.57	14.22	15.02	14.65	15.44	15.88
	6H	10.54	11.23	11.01	11.68	12.15	14.44	15.14	14.91	15.58	16.05
	8H	10.78	11.42	11.25	11.87	12.34	14.55	15.19	15.02	15.64	16.11
	12H	10.99	11.56	11.48	12.04	12.52	14.68	15.25	15.17	15.73	16.21
8H	4H	10.35	11.00	10.82	11.44	11.91	14.25	14.90	14.72	15.35	15.82
	6H	11.26	11.79	11.76	12.29	12.77	14.58	15.11	15.08	15.61	16.09
	8H	11.68	12.16	12.20	12.67	13.16	14.77	15.25	15.29	15.77	16.26
	12H	12.10	12.52	12.61	13.02	13.59	15.03	15.45	15.54	15.94	16.51
12H	4H	10.41	10.98	10.89	11.46	11.94	14.24	14.82	14.73	15.30	15.77
	6H	11.40	11.87	11.92	12.39	12.88	14.60	15.08	15.12	15.59	16.08
	8H	11.94	12.36	12.45	12.85	13.42	14.86	15.28	15.37	15.77	16.34