

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: P1059675

Luminaire Tested: S123RDR-H560D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059675
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-H560D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

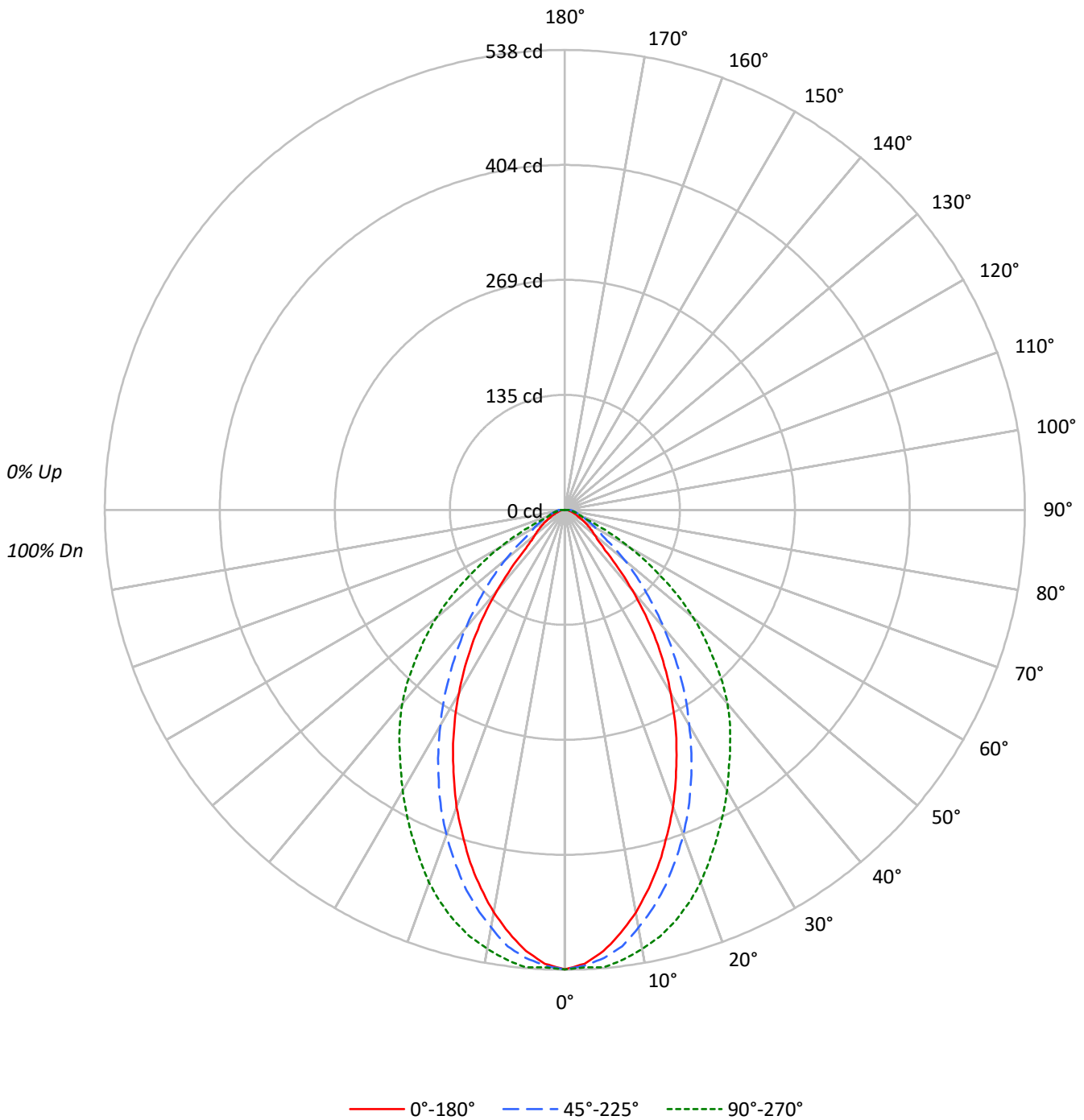
Lumens per Lamp: N/A
Luminaire Lumens: 721.6 lumens
Efficiency: N/A
Efficacy: 41.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	6313	6313	6313
5°	6108	6202	6329
10°	5701	5916	6218
15°	5196	5529	6056
20°	4622	5057	5799
25°	4006	4524	5468
30°	3359	3947	5143
35°	2661	3360	4834
40°	1884	2764	4534
45°	1109	2185	4080
50°	829	1659	3575
55°	698	1122	2870
60°	564	956	2038
65°	445	817	1075
70°	391	711	666
75°	363	667	635
80°	358	724	629
85°	445	1078	808

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4080 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	6.9
10°-20°	128.6	17.8
20°-30°	163.7	22.7
30°-40°	154.0	21.3
40°-50°	110.9	15.4
50°-60°	64.1	8.9
60°-70°	29.3	4.1
70°-80°	14.6	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°	341.8	47.4
0°-40°	495.8	68.7
0°-60°	670.8	93.0
0°-90°	721.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	721.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	518	527	526	532	537	48
15°	427	443	455	480	498	119
25°	309	325	349	388	422	141
35°	186	202	234	288	337	115
45°	67	84	132	198	246	56
55°	34	35	55	104	140	31
65°	16	23	29	33	39	16
75°	8	15	15	14	14	9
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°	537.6	537.6	537.6	537.6	537.6
2.5°	531.5	538.2	533.6	534.2	535.6
5°	518.2	526.9	526.2	531.5	536.9
7.5°	499.5	509.5	514.9	522.9	530.2
10°	478.1	489.5	496.2	510.8	521.5
12.5°	453.4	468.1	476.8	496.2	511.5
15°	427.4	442.7	454.8	480.1	498.2
17.5°	398.0	414.7	430.0	460.1	482.1
20°	369.9	386.0	404.7	437.4	464.1
22.5°	339.2	356.6	378.0	412.7	442.7
25°	309.2	325.2	349.2	388.0	422.0
27.5°	279.1	295.2	320.5	363.3	400.7
30°	247.7	264.4	291.1	338.6	379.3
32.5°	217.0	233.1	263.1	314.5	357.3
35°	185.6	201.7	234.4	288.5	337.2
37.5°	154.9	171.6	206.3	267.1	317.2
40°	122.9	140.9	180.3	245.1	295.8
42.5°	92.8	112.2	154.3	222.4	272.5
45°	66.8	83.5	131.6	197.7	245.7
47.5°	52.1	60.8	110.9	172.3	221.0
50°	45.4	46.7	90.8	148.9	195.7
52.5°	39.4	40.7	71.5	126.9	168.9
55°	34.1	35.4	54.8	104.2	140.2
57.5°	28.7	30.7	45.4	82.8	112.9
60°	24.0	26.7	40.7	63.4	86.8
62.5°	19.4	24.0	34.7	46.7	62.1
65°	16.0	22.7	29.4	32.7	38.7
67.5°	13.4	20.7	24.7	23.4	22.7
70°	11.4	18.7	20.7	18.7	19.4
72.5°	9.3	17.4	17.4	16.0	16.0
75°	8.0	15.4	14.7	14.0	14.0
77.5°	6.7	13.4	12.7	12.0	11.4
80°	5.3	10.7	10.7	10.0	9.3
82.5°	4.7	8.7	8.7	8.7	7.3
85°	3.3	7.3	8.0	7.3	6.0
87.5°	2.7	6.7	6.7	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	6.37	7.69	6.73	8.00	8.31	13.73	15.05	14.10	15.37	15.68
	3H	7.76	8.93	8.14	9.26	9.63	13.97	15.14	14.35	15.47	15.83
	4H	8.31	9.40	8.72	9.76	10.14	14.08	15.17	14.48	15.52	15.90
	6H	8.75	9.75	9.16	10.12	10.52	14.19	15.20	14.61	15.57	15.96
	8H	8.93	9.88	9.36	10.27	10.67	14.25	15.19	14.68	15.59	15.99
	12H	9.08	9.99	9.51	10.37	10.80	14.30	15.21	14.74	15.59	16.03
4H	2H	7.47	8.56	7.87	8.91	9.29	13.69	14.78	14.10	15.13	15.52
	3H	9.14	10.03	9.55	10.43	10.84	14.05	14.95	14.47	15.35	15.75
	4H	9.95	10.75	10.38	11.17	11.61	14.25	15.05	14.68	15.47	15.91
	6H	10.59	11.28	11.05	11.72	12.19	14.48	15.17	14.94	15.61	16.08
	8H	10.82	11.47	11.29	11.91	12.38	14.58	15.23	15.05	15.67	16.14
	12H	11.03	11.60	11.52	12.09	12.56	14.71	15.28	15.19	15.76	16.24
8H	4H	10.39	11.04	10.86	11.48	11.96	14.29	14.93	14.76	15.38	15.85
	6H	11.30	11.83	11.81	12.33	12.81	14.62	15.15	15.12	15.64	16.12
	8H	11.72	12.20	12.24	12.72	13.21	14.80	15.28	15.33	15.80	16.29
	12H	12.14	12.56	12.65	13.05	13.62	15.05	15.47	15.57	15.97	16.54
12H	4H	10.45	11.02	10.93	11.50	11.98	14.28	14.85	14.76	15.33	15.81
	6H	11.44	11.92	11.96	12.43	12.92	14.63	15.11	15.15	15.62	16.12
	8H	11.98	12.40	12.49	12.89	13.47	14.89	15.31	15.40	15.80	16.38