

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: P1059642

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059642
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-H340D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

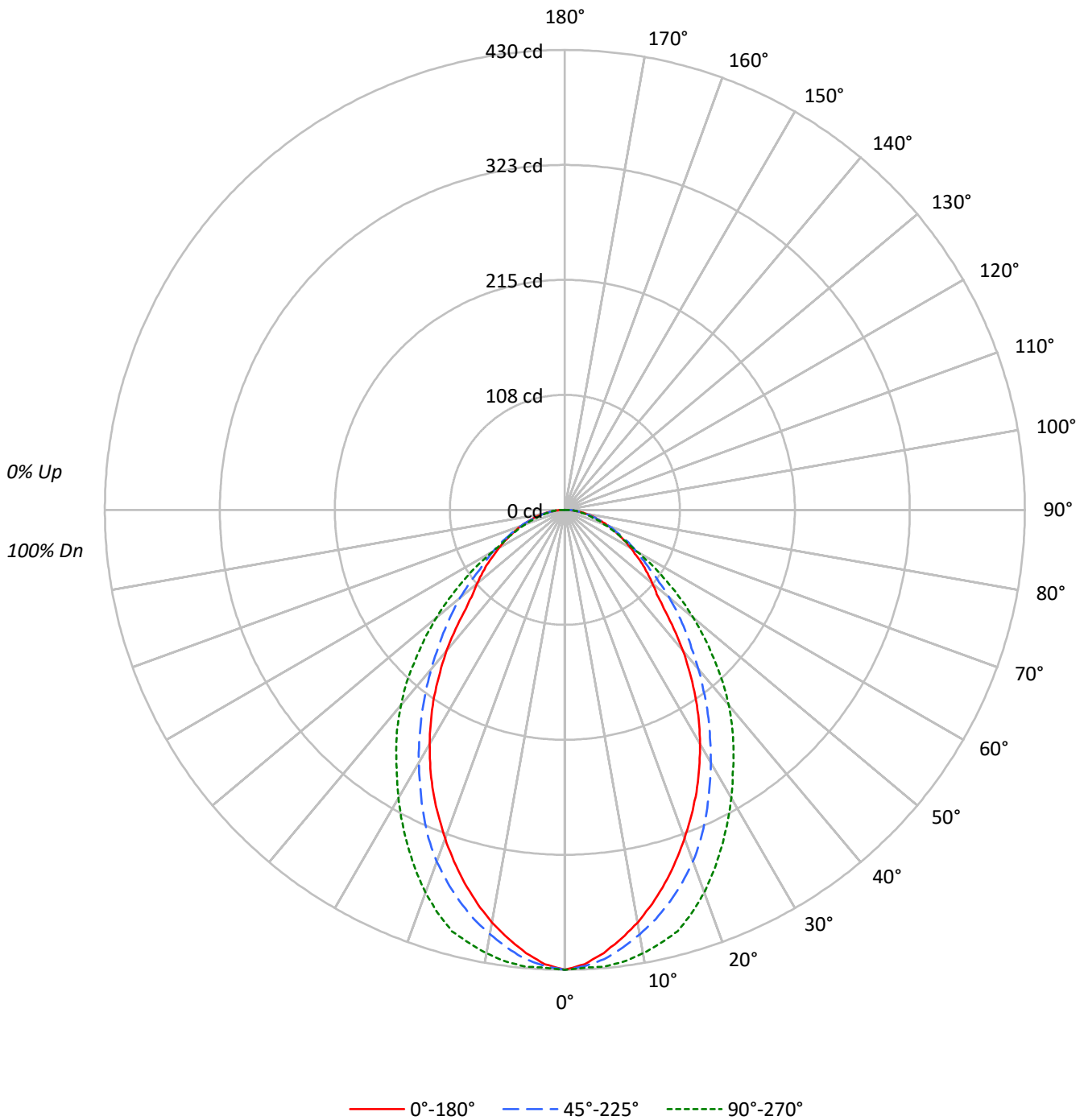
Lumens per Lamp: N/A
Luminaire Lumens: 755.6 lumens
Efficiency: N/A
Efficacy: 64.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059642

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5049	5049	5049
5°	4902	4972	5051
10°	4673	4805	5021
15°	4395	4611	4957
20°	4087	4374	4758
25°	3773	4055	4497
30°	3426	3703	4220
35°	3050	3341	3941
40°	2632	2978	3653
45°	2175	2635	3275
50°	1953	2326	2859
55°	1810	1984	2371
60°	1667	1808	1815
65°	1553	1634	1523
70°	1463	1487	1336
75°	1375	1325	1175
80°	1298	1204	1102
85°	1253	1347	1253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3275 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	5.3
10°-20°	107.3	14.2
20°-30°	145.1	19.2
30°-40°	149.1	19.7
40°-50°	125.3	16.6
50°-60°	89.8	11.9
60°-70°	57.2	7.6
70°-80°	31.4	4.2
80°-90°	10.5	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°	292.3	38.7
0°-40°	441.4	58.4
0°-60°	656.5	86.9
0°-90°	755.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	755.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	430	430	430	430	430	
5°	416	423	422	425	428	39
15°	362	372	379	396	408	101
25°	291	302	313	330	347	133
35°	213	224	233	254	275	132
45°	131	142	159	182	197	103
55°	88	90	97	110	116	79
65°	56	59	59	56	55	56
75°	30	33	29	27	26	32
85°	9	10	10	10	9	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	430.0	430.0	430.0	430.0	430.0
2.5°	425.2	431.1	427.0	427.4	428.5
5°	415.9	423.3	421.8	424.8	428.5
7.5°	404.4	412.6	413.0	420.0	425.9
10°	391.9	400.4	403.0	413.7	421.1
12.5°	377.1	386.3	391.9	405.2	414.8
15°	361.5	371.5	379.3	395.6	407.8
17.5°	344.5	355.2	365.2	382.6	395.2
20°	327.1	338.6	350.0	366.3	380.8
22.5°	309.0	320.8	332.7	348.6	364.5
25°	291.2	302.3	313.0	330.1	347.1
27.5°	272.0	283.4	292.7	311.6	329.3
30°	252.7	264.2	273.1	292.7	311.2
32.5°	232.7	244.6	252.7	273.1	292.3
35°	212.8	224.2	233.1	253.8	274.9
37.5°	191.7	204.3	213.1	236.4	257.2
40°	171.7	183.5	194.3	218.7	238.3
42.5°	151.0	163.2	175.4	200.6	218.7
45°	131.0	142.5	158.7	181.7	197.2
47.5°	116.6	124.0	142.8	162.1	176.9
50°	106.9	109.9	127.3	144.3	156.5
52.5°	97.3	99.5	111.4	126.9	136.2
55°	88.4	90.3	96.9	109.9	115.8
57.5°	78.8	80.7	86.2	93.6	96.9
60°	71.0	72.5	77.0	78.1	77.3
62.5°	63.3	65.5	67.7	65.1	64.0
65°	55.9	59.2	58.8	55.5	54.8
67.5°	49.2	52.5	50.7	47.4	46.3
70°	42.6	45.9	43.3	40.0	38.9
72.5°	36.3	40.0	35.9	32.9	32.2
75°	30.3	33.3	29.2	27.0	25.9
77.5°	24.8	27.0	23.3	21.5	20.7
80°	19.2	20.7	17.8	16.7	16.3
82.5°	14.1	14.8	13.0	13.7	13.3
85°	9.3	9.6	10.0	10.4	9.3
87.5°	4.4	6.3	6.3	5.9	4.8
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	12.81	14.28	13.18	14.59	14.90	13.88	15.34	14.24	15.65	15.97
	3H	14.51	15.82	14.89	16.15	16.51	14.97	16.28	15.34	16.60	16.97
	4H	15.16	16.39	15.56	16.74	17.12	15.37	16.59	15.77	16.94	17.32
	6H	15.66	16.80	16.08	17.17	17.56	15.68	16.81	16.09	17.18	17.57
	8H	15.84	16.92	16.26	17.31	17.71	15.81	16.89	16.24	17.28	17.68
	12H	15.96	17.00	16.39	17.38	17.81	15.93	16.96	16.36	17.35	17.78
4H	2H	13.41	14.64	13.81	14.99	15.37	14.28	15.51	14.68	15.86	16.24
	3H	15.34	16.36	15.75	16.76	17.16	15.60	16.62	16.01	17.02	17.42
	4H	16.15	17.07	16.58	17.48	17.92	16.12	17.04	16.55	17.45	17.89
	6H	16.80	17.59	17.26	18.04	18.50	16.55	17.35	17.01	17.79	18.26
	8H	17.02	17.76	17.49	18.21	18.68	16.74	17.49	17.21	17.93	18.40
	12H	17.19	17.86	17.68	18.34	18.81	16.93	17.59	17.41	18.07	18.54
8H	4H	16.39	17.13	16.85	17.58	18.05	16.37	17.11	16.83	17.56	18.02
	6H	17.18	17.79	17.67	18.28	18.76	16.92	17.53	17.41	18.02	18.50
	8H	17.49	18.04	18.00	18.55	19.04	17.19	17.75	17.71	18.26	18.75
	12H	17.76	18.25	18.27	18.74	19.31	17.49	17.98	18.00	18.47	19.03
12H	4H	16.40	17.06	16.88	17.54	18.02	16.39	17.06	16.88	17.54	18.01
	6H	17.21	17.76	17.73	18.27	18.76	16.97	17.52	17.48	18.03	18.52
	8H	17.59	18.08	18.10	18.57	19.13	17.31	17.80	17.82	18.29	18.86