

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: P1059505

Luminaire Tested: S123RDR-H1165D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059505
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D835-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

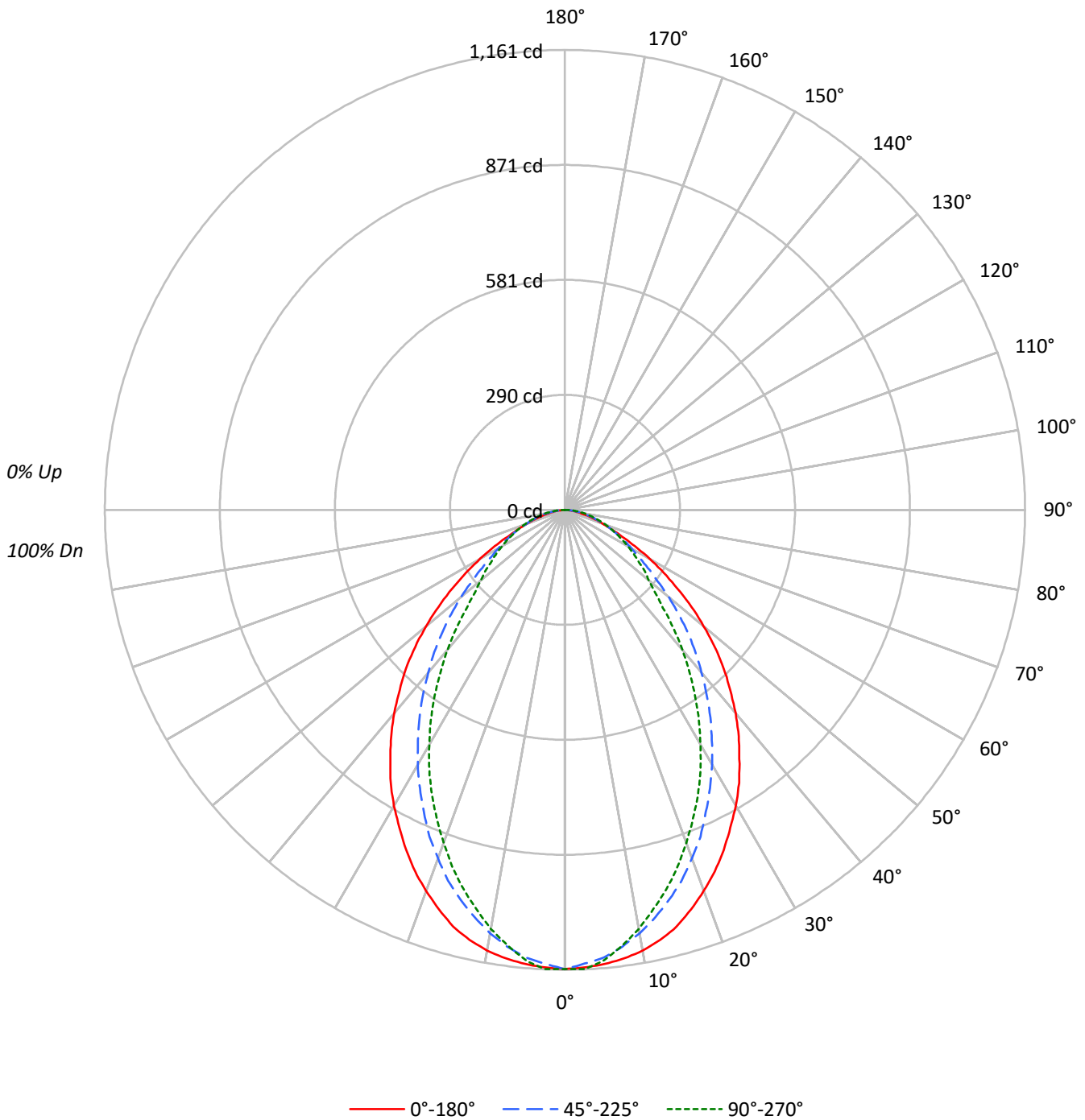
Lumens per Lamp: N/A
Luminaire Lumens: 2027.5 lumens
Efficiency: N/A
Efficacy: 55.5 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89				88	
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78				76	
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68				66	
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60				58	
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54				52	
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48				47	
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40				38	
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37				35	
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34				32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13612	13612	13612
5°	13566	13369	13450
10°	13474	12942	12810
15°	13246	12382	12044
20°	12797	11700	11178
25°	12276	10904	10290
30°	11695	10069	9276
35°	11005	9167	8210
40°	10273	8222	7070
45°	9417	7265	5807
50°	8348	6237	5040
55°	7102	5220	4621
60°	5791	4549	4286
65°	4412	4026	3987
70°	3444	3588	3732
75°	2781	3226	3475
80°	2076	2637	3205
85°	1132	1684	2816

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9417 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	5.3
10°-20°	289.5	14.3
20°-30°	393.6	19.4
30°-40°	408.0	20.1
40°-50°	344.1	17.0
50°-60°	244.3	12.0
60°-70°	149.3	7.4
70°-80°	74.3	3.7
80°-90°	16.9	0.8
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°	790.7	39.0
0°-40°	1198.7	59.1
0°-60°	1787.1	88.1
0°-90°	2027.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2027.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1159	1159	1159	1159	1159	
5°	1151	1151	1134	1141	1141	109
15°	1090	1069	1018	1000	991	306
25°	948	906	842	811	794	436
35°	768	709	640	595	573	480
45°	567	507	438	378	350	435
55°	347	311	255	233	226	311
65°	159	153	145	145	144	162
75°	61	66	71	74	77	66
85°	8	10	12	18	21	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1159.2	1159.2	1159.2	1159.2	1159.2
2.5°	1156.5	1157.9	1146.7	1159.2	1160.6
5°	1150.9	1150.9	1134.2	1141.1	1141.1
7.5°	1142.5	1139.7	1111.9	1111.9	1109.1
10°	1130.0	1121.6	1085.4	1078.4	1074.3
12.5°	1111.9	1097.9	1053.4	1040.8	1032.5
15°	1089.6	1068.7	1018.5	1000.4	990.7
17.5°	1057.5	1036.6	980.9	955.8	944.7
20°	1024.1	993.4	936.3	911.2	894.5
22.5°	987.9	948.9	893.1	862.5	844.4
25°	947.5	905.7	841.6	810.9	794.2
27.5°	904.3	858.3	792.8	758.0	741.2
30°	862.5	809.5	742.6	703.6	684.1
32.5°	817.9	758.0	689.7	649.3	629.8
35°	767.7	709.2	639.5	594.9	572.7
37.5°	720.3	660.4	588.0	540.6	515.5
40°	670.2	610.3	536.4	487.7	461.2
42.5°	617.2	560.1	487.7	430.5	405.5
45°	567.1	507.2	437.5	377.6	349.7
47.5°	512.7	457.0	388.7	327.4	307.9
50°	457.0	405.5	341.4	285.6	275.9
52.5°	402.7	359.5	294.0	257.8	253.6
55°	346.9	310.7	255.0	232.7	225.7
57.5°	295.4	268.9	218.8	207.6	204.8
60°	246.6	224.3	193.7	186.7	182.5
62.5°	199.2	186.7	168.6	165.8	163.0
65°	158.8	153.3	144.9	144.9	143.5
67.5°	125.4	125.4	124.0	126.8	125.4
70°	100.3	101.7	104.5	107.3	108.7
72.5°	79.4	83.6	86.4	90.6	92.0
75°	61.3	65.5	71.1	73.8	76.6
77.5°	44.6	48.8	54.3	58.5	61.3
80°	30.7	33.4	39.0	44.6	47.4
82.5°	19.5	20.9	25.1	30.7	33.4
85°	8.4	9.8	12.5	18.1	20.9
87.5°	0.0	0.0	1.4	5.6	9.8
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	17.88	19.33	18.25	19.64	19.96	15.98	17.43	16.34	17.74	18.06
	3H	18.78	20.07	19.16	20.40	20.76	17.55	18.85	17.93	19.17	19.54
	4H	19.06	20.27	19.46	20.62	21.00	18.15	19.36	18.55	19.71	20.09
	6H	19.21	20.33	19.62	20.70	21.09	18.60	19.71	19.01	20.08	20.47
	8H	19.23	20.30	19.66	20.69	21.09	18.75	19.81	19.17	20.20	20.60
	12H	19.23	20.24	19.66	20.63	21.05	18.84	19.86	19.28	20.24	20.67
4H	2H	18.12	19.34	18.52	19.69	20.07	16.52	17.73	16.92	18.08	18.46
	3H	19.24	20.24	19.65	20.64	21.04	18.29	19.29	18.70	19.69	20.10
	4H	19.63	20.53	20.06	20.94	21.38	19.00	19.90	19.44	20.32	20.76
	6H	19.87	20.65	20.33	21.09	21.55	19.58	20.35	20.03	20.80	21.26
	8H	19.91	20.64	20.38	21.09	21.55	19.77	20.49	20.23	20.94	21.41
	12H	19.92	20.57	20.40	21.05	21.52	19.91	20.55	20.39	21.03	21.51
8H	4H	19.79	20.51	20.25	20.96	21.43	19.21	19.94	19.68	20.39	20.85
	6H	20.10	20.70	20.60	21.19	21.67	19.89	20.49	20.39	20.98	21.46
	8H	20.17	20.71	20.69	21.22	21.71	20.15	20.68	20.66	21.20	21.69
	12H	20.21	20.68	20.72	21.18	21.74	20.36	20.83	20.87	21.32	21.89
12H	4H	19.79	20.44	20.27	20.92	21.39	19.21	19.86	19.69	20.34	20.81
	6H	20.11	20.65	20.63	21.16	21.65	19.90	20.44	20.41	20.95	21.44
	8H	20.23	20.70	20.74	21.19	21.76	20.20	20.68	20.71	21.17	21.74