

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: P1059669

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059669  
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-H560D835-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: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

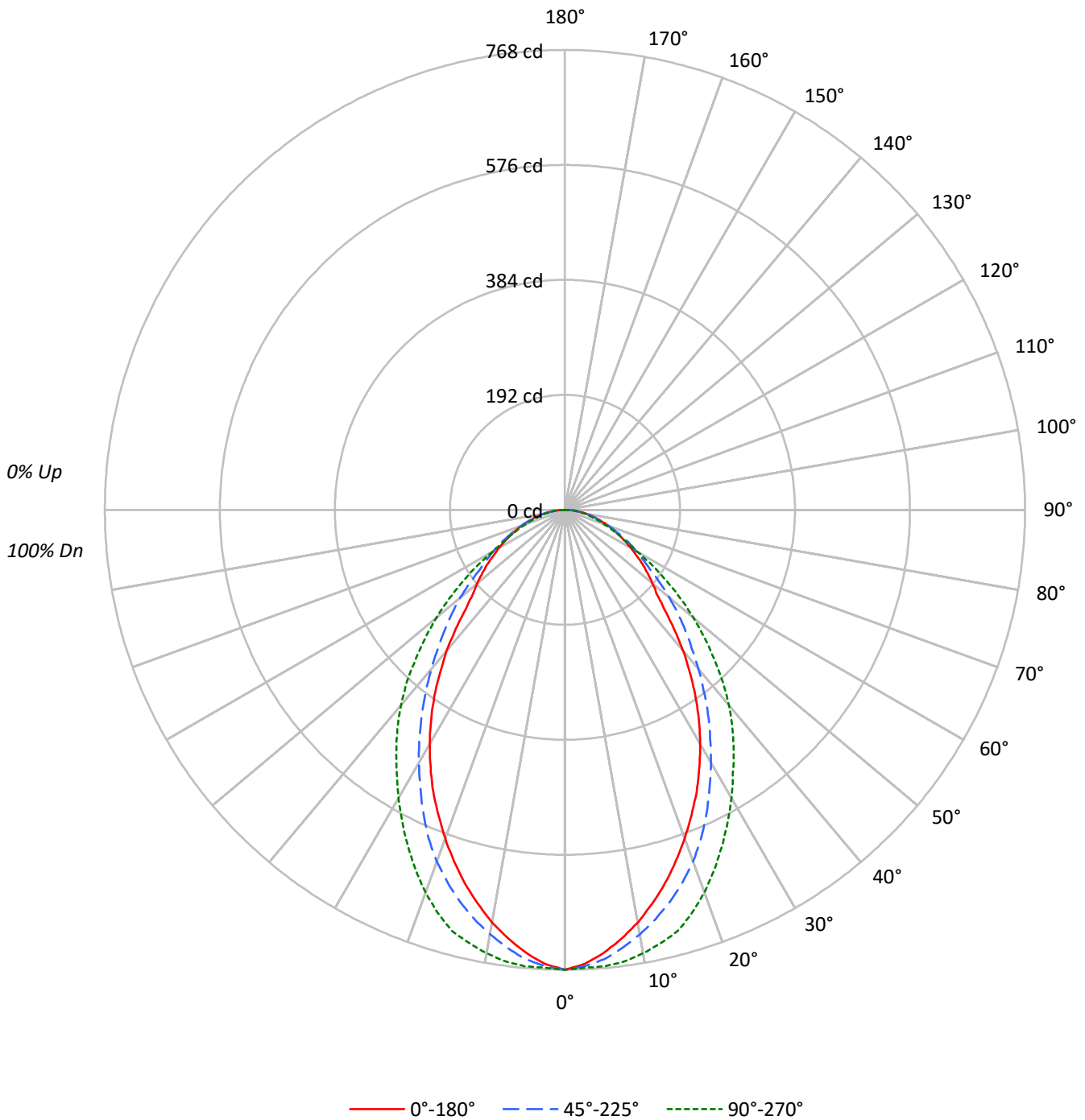
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1349.3 lumens  
Efficiency: N/A  
Efficacy: 77.5 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): 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				
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9017	9017	9017
5°	8756	8879	9020
10°	8344	8580	8967
15°	7848	8234	8852
20°	7300	7811	8497
25°	6739	7244	8032
30°	6119	6613	7536
35°	5447	5968	7038
40°	4700	5318	6524
45°	3884	4708	5849
50°	3489	4152	5106
55°	3233	3544	4234
60°	2980	3229	3243
65°	2773	2920	2717
70°	2609	2654	2383
75°	2459	2368	2101
80°	2326	2144	1968
85°	2223	2398	2223

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5849 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.1	5.3
10°-20°	191.6	14.2
20°-30°	259.2	19.2
30°-40°	266.4	19.7
40°-50°	223.7	16.6
50°-60°	160.4	11.9
60°-70°	102.1	7.6
70°-80°	56.1	4.2
80°-90°	18.7	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°	521.9	38.7
0°-40°	788.3	58.4
0°-60°	1172.4	86.9
0°-90°	1349.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1349.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	743	756	753	759	765	70
15°	646	664	677	706	728	181
25°	520	540	559	590	620	238
35°	380	400	416	453	491	236
45°	234	254	284	324	352	185
55°	158	161	173	196	207	141
65°	100	106	105	99	98	99
75°	54	60	52	48	46	58
85°	16	17	18	18	16	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.9	767.9	767.9	767.9	767.9
2.5°	759.3	769.9	762.6	763.3	765.2
5°	742.8	756.0	753.3	758.6	765.2
7.5°	722.3	736.8	737.5	750.0	760.6
10°	699.8	715.0	719.6	738.8	752.0
12.5°	673.4	689.9	699.8	723.6	740.8
15°	645.6	663.5	677.3	706.4	728.2
17.5°	615.2	634.4	652.2	683.3	705.8
20°	584.2	604.7	625.1	654.2	680.0
22.5°	551.8	572.9	594.1	622.5	650.9
25°	520.1	539.9	559.1	589.5	619.9
27.5°	485.7	506.2	522.7	556.4	588.1
30°	451.3	471.8	487.7	522.7	555.8
32.5°	415.7	436.8	451.3	487.7	522.1
35°	380.0	400.5	416.3	453.3	491.0
37.5°	342.3	364.8	380.6	422.3	459.3
40°	306.6	327.8	346.9	390.5	425.6
42.5°	269.6	291.4	313.2	358.2	390.5
45°	233.9	254.4	283.5	324.5	352.2
47.5°	208.2	221.4	255.1	289.4	315.9
50°	191.0	196.3	227.3	257.7	279.5
52.5°	173.8	177.8	198.9	226.7	243.2
55°	157.9	161.2	173.1	196.3	206.8
57.5°	140.8	144.1	154.0	167.2	173.1
60°	126.9	129.5	137.5	139.4	138.1
62.5°	113.0	117.0	120.9	116.3	114.3
65°	99.8	105.7	105.1	99.1	97.8
67.5°	87.9	93.8	90.5	84.6	82.6
70°	76.0	81.9	77.3	71.4	69.4
72.5°	64.8	71.4	64.1	58.8	57.5
75°	54.2	59.5	52.2	48.2	46.3
77.5°	44.3	48.2	41.6	38.3	37.0
80°	34.4	37.0	31.7	29.7	29.1
82.5°	25.1	26.4	23.1	24.5	23.8
85°	16.5	17.2	17.8	18.5	16.5
87.5°	7.9	11.2	11.2	10.6	8.6
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	14.83	16.29	15.19	16.60	16.92	15.89	17.36	16.26	17.67	17.99
	3H	16.52	17.83	16.90	18.16	18.52	16.98	18.29	17.36	18.62	18.98
	4H	17.18	18.41	17.58	18.75	19.13	17.38	18.61	17.78	18.96	19.34
	6H	17.68	18.81	18.09	19.18	19.57	17.69	18.82	18.10	19.19	19.58
	8H	17.85	18.93	18.28	19.32	19.72	17.83	18.90	18.25	19.29	19.70
	12H	17.98	19.01	18.41	19.39	19.82	17.95	18.98	18.38	19.36	19.79
4H	2H	15.43	16.66	15.83	17.01	17.39	16.30	17.53	16.70	17.88	18.26
	3H	17.35	18.37	17.77	18.77	19.18	17.62	18.63	18.03	19.04	19.44
	4H	18.17	19.08	18.60	19.50	19.94	18.14	19.05	18.57	19.47	19.91
	6H	18.81	19.61	19.27	20.05	20.52	18.57	19.36	19.03	19.81	20.27
	8H	19.04	19.78	19.50	20.23	20.69	18.76	19.50	19.22	19.95	20.42
	12H	19.21	19.87	19.69	20.35	20.82	18.94	19.61	19.42	20.08	20.56
8H	4H	18.40	19.15	18.87	19.59	20.06	18.38	19.13	18.85	19.57	20.04
	6H	19.19	19.81	19.69	20.30	20.78	18.93	19.54	19.43	20.04	20.51
	8H	19.50	20.06	20.02	20.57	21.06	19.21	19.76	19.72	20.27	20.76
	12H	19.77	20.26	20.28	20.75	21.32	19.50	19.99	20.01	20.48	21.05
12H	4H	18.42	19.08	18.90	19.56	20.03	18.41	19.07	18.89	19.55	20.02
	6H	19.23	19.78	19.74	20.29	20.78	18.98	19.53	19.50	20.04	20.53
	8H	19.60	20.09	20.11	20.58	21.15	19.32	19.81	19.83	20.30	20.87