

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: P1056606

Luminaire Tested: S125R3DR-H850D835-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056606
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H850D835-X4F0-XX-UDD-FLL-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

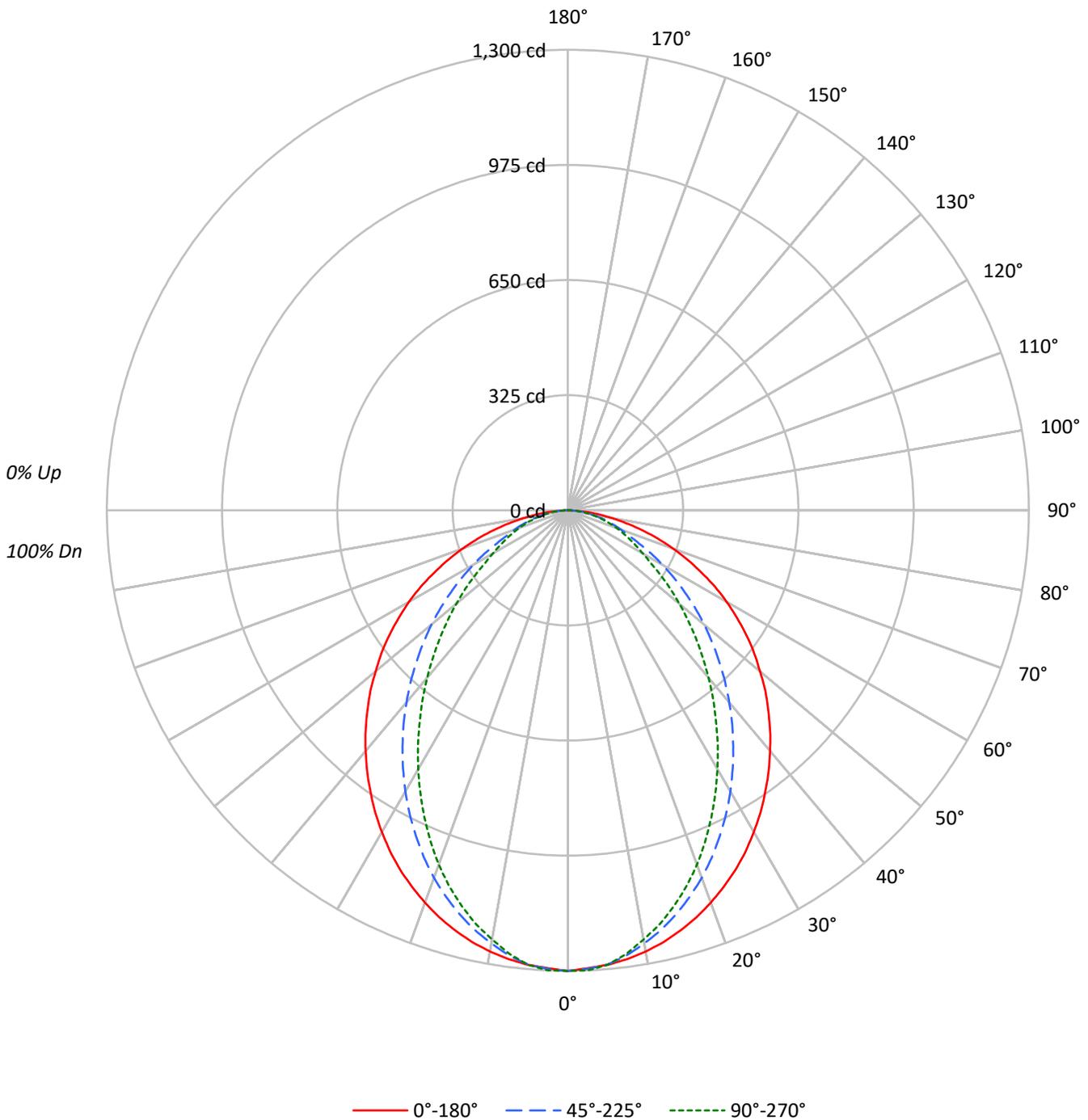
Lumens per Lamp: N/A
Luminaire Lumens: 2756.4 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73																												
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																												
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55																												
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48																												
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43																												
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38																												
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34																												
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31																												
10	56	43	36	31	55	43	35	30	42	35	30	41	35	30	40	34	30	28																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9194	9194	9194
5°	9139	9133	9139
10°	9079	8912	8828
15°	8987	8639	8462
20°	8866	8305	8006
25°	8731	7909	7463
30°	8561	7478	6885
35°	8374	7012	6284
40°	8186	6533	5693
45°	7987	6032	5102
50°	7774	5517	4516
55°	7579	4953	3927
60°	7311	4353	3450
65°	6949	3693	3207
70°	6525	3303	3003
75°	5897	3043	2830
80°	5125	2760	2642
85°	4007	2433	2433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7987 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	4.4
10°-20°	334.1	12.1
20°-30°	472.0	17.1
30°-40°	519.6	18.8
40°-50°	484.7	17.6
50°-60°	386.9	14.0
60°-70°	260.4	9.4
70°-80°	138.7	5.0
80°-90°	38.5	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°	927.7	33.7
0°-40°	1447.3	52.5
0°-60°	2318.9	84.1
0°-90°	2756.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2756.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1300	1300	1300	1300	1300	
5°	1288	1299	1287	1283	1288	122
15°	1228	1221	1180	1160	1156	346
25°	1119	1086	1014	969	957	515
35°	970	913	812	749	728	607
45°	799	723	603	530	510	617
55°	615	522	402	338	319	549
65°	415	324	221	196	192	412
75°	216	143	111	105	104	230
85°	49	34	30	31	30	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.5	1300.5	1300.5	1300.5	1300.5
2.5°	1293.7	1304.4	1295.7	1297.6	1299.6
5°	1287.9	1298.6	1287.0	1283.1	1287.9
7.5°	1278.2	1287.0	1267.6	1258.9	1262.8
10°	1264.7	1270.5	1241.5	1229.8	1229.8
12.5°	1248.2	1248.2	1213.4	1196.9	1196.9
15°	1227.9	1221.1	1180.4	1160.1	1156.2
17.5°	1204.7	1192.1	1143.6	1117.5	1112.7
20°	1178.5	1158.2	1103.9	1070.0	1064.2
22.5°	1149.5	1123.3	1060.4	1018.7	1011.9
25°	1119.4	1085.5	1013.9	969.3	956.8
27.5°	1085.5	1044.9	966.4	916.1	900.6
30°	1048.7	1002.3	916.1	859.9	843.5
32.5°	1011.0	958.7	864.8	804.7	786.3
35°	970.3	913.2	812.5	748.6	728.2
37.5°	929.6	867.7	761.1	694.3	673.0
40°	887.0	819.2	707.9	639.1	616.9
42.5°	844.4	771.8	655.6	585.9	562.6
45°	798.9	723.4	603.3	529.7	510.3
47.5°	755.3	674.0	552.0	480.3	459.0
50°	706.9	622.7	501.6	430.0	410.6
52.5°	662.4	572.3	451.3	384.4	364.1
55°	614.9	522.0	401.9	338.0	318.6
57.5°	565.5	471.6	354.4	294.4	276.0
60°	517.1	421.2	307.9	252.7	244.0
62.5°	467.7	373.8	264.4	221.8	215.9
65°	415.4	324.4	220.8	195.6	191.7
67.5°	366.0	277.0	185.9	171.4	167.5
70°	315.7	229.5	159.8	147.2	145.3
72.5°	266.3	184.0	134.6	125.9	124.0
75°	215.9	143.3	111.4	104.6	103.6
77.5°	169.5	107.5	88.1	85.2	83.3
80°	125.9	80.4	67.8	65.8	64.9
82.5°	86.2	55.2	48.4	48.4	46.5
85°	49.4	33.9	30.0	31.0	30.0
87.5°	18.4	14.5	13.6	14.5	14.5
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	19.00	20.54	19.36	20.85	21.16	15.38	16.92	15.74	17.23	17.55
	3H	20.78	22.17	21.16	22.49	22.85	16.85	18.24	17.23	18.57	18.93
	4H	21.43	22.73	21.83	23.08	23.46	17.44	18.74	17.84	19.09	19.47
	6H	21.91	23.11	22.32	23.48	23.87	17.91	19.11	18.32	19.47	19.87
	8H	22.07	23.21	22.49	23.60	24.00	18.07	19.21	18.49	19.60	20.00
	12H	22.16	23.26	22.59	23.64	24.07	18.18	19.28	18.61	19.66	20.09
4H	2H	19.13	20.43	19.53	20.78	21.16	16.06	17.35	16.46	17.70	18.08
	3H	21.10	22.18	21.51	22.58	22.98	17.73	18.81	18.14	19.21	19.61
	4H	21.85	22.82	22.28	23.24	23.67	18.44	19.41	18.87	19.82	20.26
	6H	22.44	23.29	22.90	23.73	24.19	19.02	19.87	19.48	20.31	20.77
	8H	22.65	23.44	23.11	23.88	24.35	19.23	20.02	19.69	20.47	20.93
	12H	22.79	23.50	23.28	23.98	24.45	19.39	20.10	19.87	20.58	21.05
8H	4H	21.91	22.70	22.37	23.15	23.61	18.80	19.59	19.26	20.04	20.50
	6H	22.57	23.23	23.06	23.72	24.19	19.50	20.16	20.00	20.65	21.13
	8H	22.82	23.41	23.34	23.92	24.41	19.79	20.37	20.30	20.88	21.37
	12H	23.03	23.55	23.54	24.04	24.61	20.03	20.55	20.54	21.04	21.60
12H	4H	21.90	22.61	22.38	23.09	23.56	18.85	19.56	19.33	20.03	20.51
	6H	22.56	23.15	23.08	23.66	24.15	19.57	20.16	20.09	20.67	21.16
	8H	22.86	23.38	23.37	23.87	24.43	19.92	20.44	20.43	20.93	21.49