

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: P1056609

Luminaire Tested: S125R3DR-H850D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056609
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-H850D840-X4F0-XX-UDD-FLL-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

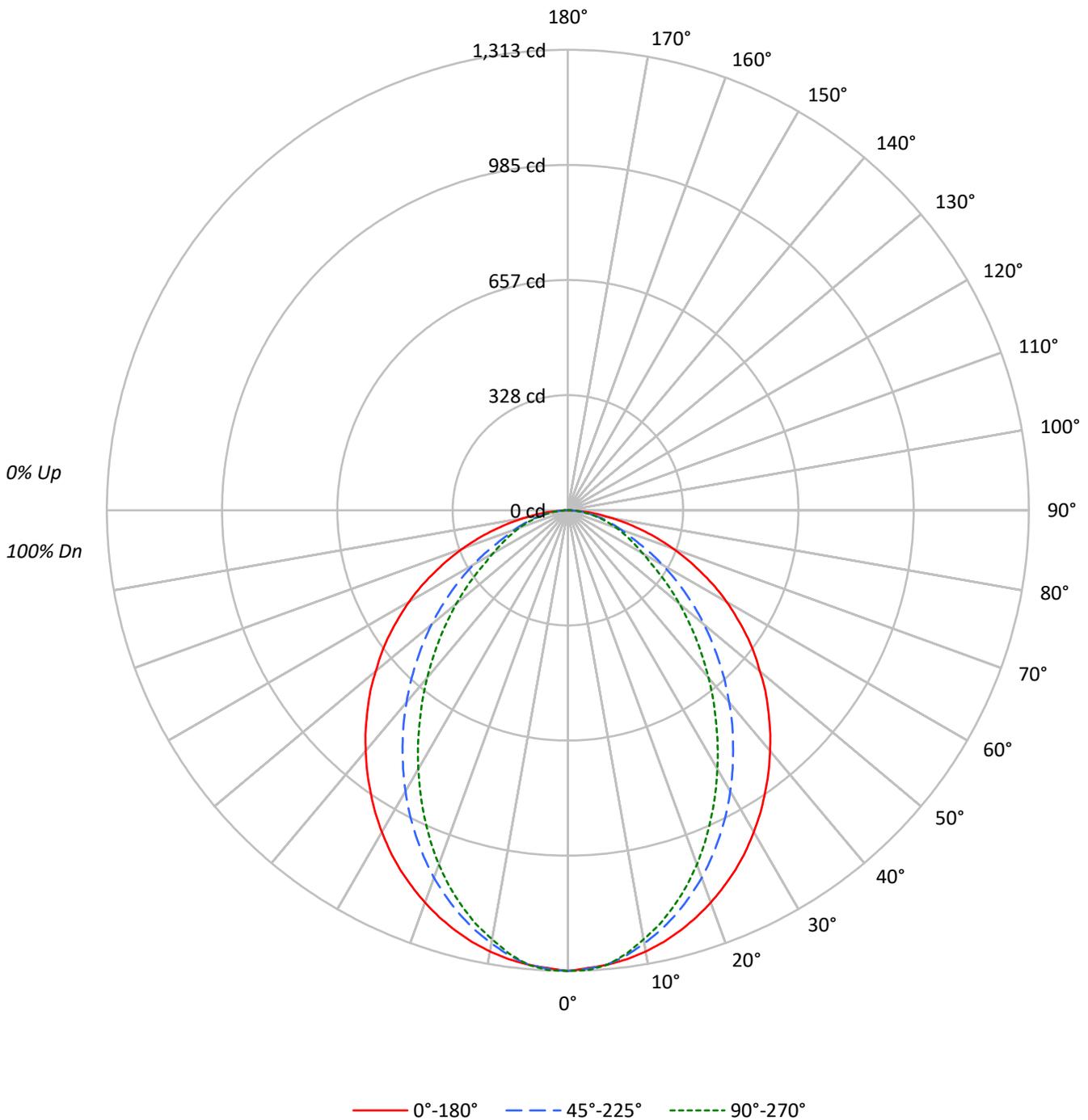
Lumens per Lamp: N/A
Luminaire Lumens: 2783.6 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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°	9285	9285	9285
5°	9230	9223	9230
10°	9168	9000	8916
15°	9075	8725	8545
20°	8953	8387	8085
25°	8818	7987	7537
30°	8645	7552	6953
35°	8457	7081	6347
40°	8267	6597	5748
45°	8066	6091	5153
50°	7851	5572	4560
55°	7654	5001	3965
60°	7383	4397	3484
65°	7017	3730	3238
70°	6589	3336	3032
75°	5957	3073	2857
80°	5174	2789	2667
85°	4047	2458	2458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8066 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.9	4.4
10°-20°	337.4	12.1
20°-30°	476.6	17.1
30°-40°	524.7	18.8
40°-50°	489.4	17.6
50°-60°	390.7	14.0
60°-70°	262.9	9.4
70°-80°	140.0	5.0
80°-90°	38.9	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°	936.9	33.7
0°-40°	1461.6	52.5
0°-60°	2341.7	84.1
0°-90°	2783.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2783.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1313	1313	1313	1313	1313	
5°	1301	1311	1300	1296	1301	123
15°	1240	1233	1192	1172	1168	350
25°	1130	1096	1024	979	966	520
35°	980	922	820	756	735	613
45°	807	730	609	535	515	623
55°	621	527	406	341	322	554
65°	420	328	223	198	194	416
75°	218	145	112	106	105	232
85°	50	34	30	31	30	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1313.4	1313.4	1313.4	1313.4	1313.4
2.5°	1306.5	1317.3	1308.5	1310.4	1312.4
5°	1300.6	1311.4	1299.7	1295.7	1300.6
7.5°	1290.9	1299.7	1280.1	1271.3	1275.2
10°	1277.2	1283.0	1253.7	1242.0	1242.0
12.5°	1260.5	1260.5	1225.3	1208.7	1208.7
15°	1240.0	1233.2	1192.1	1171.6	1167.6
17.5°	1216.5	1203.8	1154.9	1128.5	1123.6
20°	1190.1	1169.6	1114.8	1080.6	1074.7
22.5°	1160.8	1134.4	1070.8	1028.8	1021.9
25°	1130.5	1096.3	1023.9	978.9	966.2
27.5°	1096.3	1055.2	976.0	925.1	909.5
30°	1059.1	1012.2	925.1	868.4	851.8
32.5°	1021.0	968.1	873.3	812.7	794.1
35°	979.9	922.2	820.5	755.9	735.4
37.5°	938.8	876.2	768.6	701.2	679.7
40°	895.8	827.3	714.9	645.4	622.9
42.5°	852.7	779.4	662.1	591.6	568.2
45°	806.8	730.5	609.2	534.9	515.4
47.5°	762.8	680.6	557.4	485.1	463.5
50°	713.9	628.8	506.6	434.2	414.6
52.5°	668.9	578.0	455.7	388.2	367.7
55°	621.0	527.1	405.8	341.3	321.7
57.5°	571.1	476.2	357.9	297.3	278.7
60°	522.2	425.4	311.0	255.2	246.4
62.5°	472.3	377.5	267.0	223.9	218.1
65°	419.5	327.6	223.0	197.5	193.6
67.5°	369.7	279.7	187.8	173.1	169.2
70°	318.8	231.8	161.4	148.6	146.7
72.5°	268.9	185.8	135.9	127.1	125.2
75°	218.1	144.7	112.5	105.6	104.6
77.5°	171.1	108.5	89.0	86.1	84.1
80°	127.1	81.2	68.5	66.5	65.5
82.5°	87.0	55.7	48.9	48.9	46.9
85°	49.9	34.2	30.3	31.3	30.3
87.5°	18.6	14.7	13.7	14.7	14.7
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	19.03	20.57	19.39	20.88	21.20	15.41	16.95	15.78	17.27	17.58
	3H	20.82	22.20	21.19	22.53	22.89	16.89	18.27	17.27	18.60	18.96
	4H	21.47	22.77	21.87	23.12	23.49	17.48	18.78	17.88	19.13	19.50
	6H	21.95	23.15	22.36	23.51	23.90	17.94	19.14	18.35	19.51	19.90
	8H	22.10	23.24	22.53	23.63	24.03	18.10	19.25	18.53	19.64	20.04
	12H	22.19	23.29	22.62	23.67	24.10	18.22	19.31	18.65	19.69	20.12
4H	2H	19.16	20.46	19.56	20.81	21.19	16.09	17.39	16.49	17.74	18.12
	3H	21.14	22.22	21.55	22.62	23.02	17.77	18.85	18.18	19.25	19.65
	4H	21.88	22.85	22.31	23.27	23.71	18.47	19.44	18.90	19.86	20.30
	6H	22.47	23.32	22.93	23.76	24.22	19.06	19.90	19.51	20.35	20.80
	8H	22.68	23.47	23.14	23.92	24.38	19.26	20.06	19.73	20.50	20.97
	12H	22.83	23.54	23.31	24.02	24.49	19.42	20.13	19.91	20.61	21.08
8H	4H	21.94	22.74	22.41	23.18	23.65	18.83	19.63	19.30	20.07	20.54
	6H	22.60	23.26	23.10	23.75	24.23	19.54	20.19	20.03	20.68	21.16
	8H	22.86	23.45	23.37	23.95	24.44	19.82	20.41	20.33	20.92	21.41
	12H	23.06	23.59	23.57	24.08	24.64	20.06	20.58	20.57	21.07	21.64
12H	4H	21.94	22.65	22.42	23.12	23.59	18.88	19.59	19.36	20.07	20.54
	6H	22.60	23.19	23.11	23.70	24.18	19.61	20.20	20.12	20.71	21.19
	8H	22.89	23.41	23.40	23.90	24.47	19.95	20.47	20.46	20.96	21.53