

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059114

Luminaire Tested: S123RDRP-S1165D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059114
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1165D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

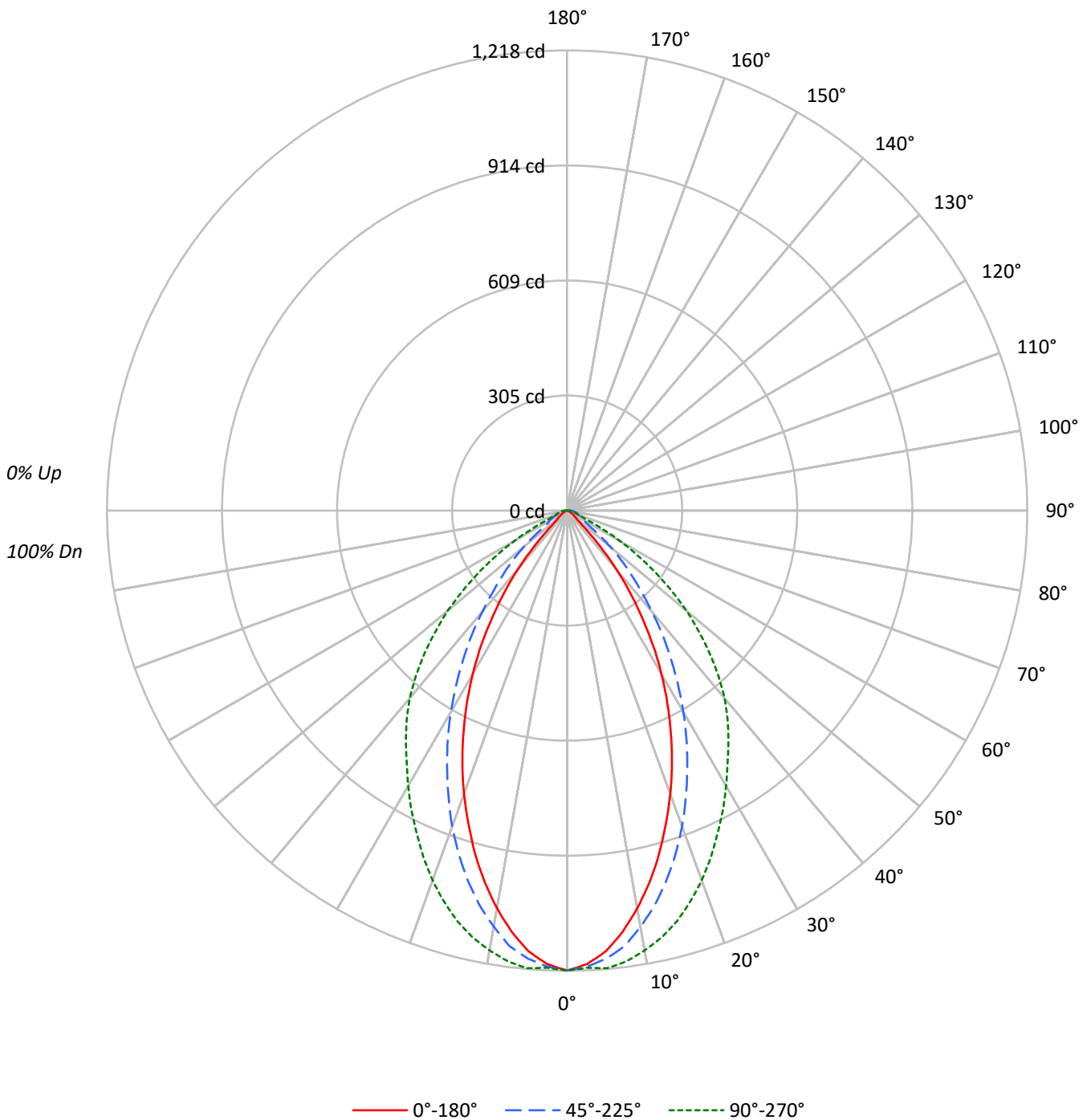
Lumens per Lamp: N/A
Luminaire Lumens: 1461.8 lumens
Efficiency: N/A
Efficacy: 35.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81					81			
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73					73			
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66					66			
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60					60			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55					55			
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50					50			
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47					47			
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43					43			
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14296	14296	14296
5°	13804	14030	14332
10°	12743	13334	14097
15°	11436	12331	13673
20°	9976	11115	13015
25°	8415	9742	12209
30°	6769	8331	11410
35°	4954	6858	10664
40°	3090	5347	9931
45°	1169	3986	8848
50°	555	2748	7541
55°	426	1507	5831
60°	301	1278	3833
65°	222	1111	1600
70°	220	1044	1044
75°	290	1089	1089
80°	433	1298	1190
85°	862	2156	1725

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8848 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	7.6
10°-20°	286.6	19.6
20°-30°	354.7	24.3
30°-40°	318.0	21.8
40°-50°	208.5	14.3
50°-60°	104.4	7.1
60°-70°	40.7	2.8
70°-80°	22.9	1.6
80°-90°	14.1	1.0
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°	753.1	51.5
0°-40°	1071.1	73.3
0°-60°	1384.0	94.7
0°-90°	1461.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1461.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1171	1190	1190	1203	1216	108
15°	941	979	1014	1082	1125	262
25°	650	690	752	859	942	296
35°	346	392	478	622	744	215
45°	70	114	240	411	533	67
55°	21	26	74	202	285	19
65°	8	24	40	53	58	8
75°	6	24	24	24	24	7
85°	6	16	16	16	13	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1217.5	1217.5	1217.5	1217.5	1217.5
2.5°	1201.5	1219.1	1207.9	1209.5	1211.1
5°	1171.1	1190.3	1190.3	1203.1	1215.9
7.5°	1124.7	1147.1	1163.1	1185.5	1203.1
10°	1068.7	1095.9	1118.3	1158.3	1182.3
12.5°	1007.9	1041.5	1070.3	1123.1	1156.7
15°	940.7	979.1	1014.3	1081.5	1124.7
17.5°	868.7	907.1	953.5	1031.9	1084.7
20°	798.3	836.7	889.5	977.5	1041.5
22.5°	724.7	764.7	820.7	918.3	993.5
25°	649.5	689.5	751.9	859.1	942.3
27.5°	574.4	614.4	684.7	801.5	892.7
30°	499.2	539.2	614.4	739.1	841.5
32.5°	424.0	467.2	545.6	681.5	790.3
35°	345.6	392.0	478.4	622.3	743.9
37.5°	273.6	316.8	414.4	571.2	697.5
40°	201.6	248.0	348.8	521.6	647.9
42.5°	131.2	180.8	289.6	467.2	592.0
45°	70.4	113.6	240.0	411.2	532.8
47.5°	38.4	62.4	193.6	352.0	472.0
50°	30.4	35.2	150.4	300.8	412.8
52.5°	25.6	28.8	107.2	252.8	347.2
55°	20.8	25.6	73.6	201.6	284.8
57.5°	17.6	22.4	57.6	156.8	222.4
60°	12.8	19.2	54.4	115.2	163.2
62.5°	9.6	20.8	48.0	80.0	107.2
65°	8.0	24.0	40.0	52.8	57.6
67.5°	6.4	25.6	35.2	33.6	33.6
70°	6.4	24.0	30.4	28.8	30.4
72.5°	6.4	25.6	27.2	25.6	27.2
75°	6.4	24.0	24.0	24.0	24.0
77.5°	6.4	22.4	22.4	20.8	20.8
80°	6.4	19.2	19.2	19.2	17.6
82.5°	6.4	17.6	17.6	17.6	14.4
85°	6.4	16.0	16.0	16.0	12.8
87.5°	4.8	14.4	16.0	14.4	9.6
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	1.60	2.85	1.96	3.17	3.48	15.85	17.10	16.21	17.41	17.73
	3H	3.93	5.04	4.31	5.37	5.74	15.93	17.04	16.31	17.37	17.73
	4H	5.03	6.07	5.44	6.42	6.80	16.00	17.04	16.41	17.39	17.77
	6H	6.02	6.97	6.44	7.35	7.74	16.11	17.06	16.52	17.43	17.82
	8H	6.51	7.40	6.94	7.80	8.20	16.17	17.06	16.60	17.46	17.86
	12H	7.06	7.92	7.50	8.31	8.74	16.25	17.11	16.68	17.49	17.92
4H	2H	4.85	5.88	5.25	6.23	6.62	15.70	16.74	16.11	17.09	17.47
	3H	7.17	8.01	7.58	8.42	8.82	15.88	16.72	16.29	17.13	17.53
	4H	8.54	9.29	8.97	9.71	10.16	16.03	16.78	16.46	17.20	17.65
	6H	9.62	10.28	10.09	10.72	11.19	16.25	16.91	16.72	17.35	17.82
	8H	10.08	10.69	10.55	11.14	11.61	16.38	16.99	16.85	17.44	17.91
	12H	10.57	11.11	11.06	11.60	12.07	16.55	17.09	17.04	17.57	18.05
8H	4H	9.51	10.12	9.98	10.57	11.04	16.03	16.64	16.50	17.08	17.55
	6H	11.03	11.53	11.54	12.03	12.51	16.36	16.86	16.87	17.36	17.84
	8H	11.81	12.26	12.33	12.77	13.26	16.60	17.04	17.12	17.56	18.05
	12H	12.61	13.01	13.13	13.50	14.08	16.93	17.33	17.45	17.82	18.40
12H	4H	9.69	10.23	10.18	10.71	11.18	16.01	16.55	16.50	17.03	17.51
	6H	11.35	11.80	11.87	12.31	12.81	16.38	16.83	16.91	17.35	17.84
	8H	12.30	12.70	12.82	13.20	13.77	16.69	17.09	17.21	17.59	18.16