

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: P242277

Luminaire Tested: S122DRP-S865D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242277
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S865D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

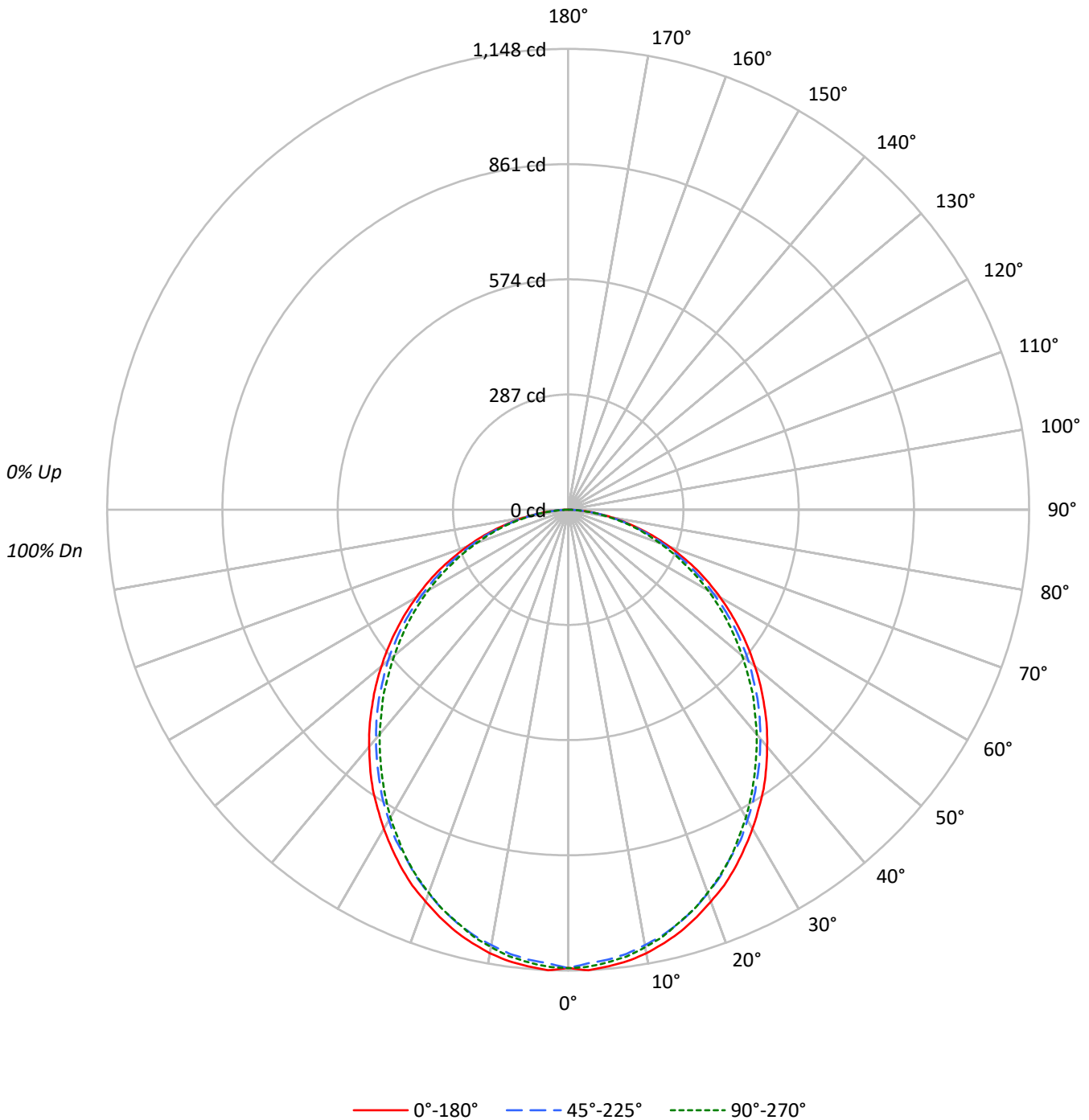
Lumens per Lamp: N/A
Luminaire Lumens: 2905.2 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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

TEST NUMBER: P242277

CATALOG NUMBER: S122DRP-S865D935-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P242277

CATALOG NUMBER: S122DRP-S865D935-X4F0-XX-UDD-F-W

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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21751	21751	21751
5°	21834	21518	21644
10°	21703	21301	21407
15°	21435	21023	21001
20°	21055	20609	20586
25°	20676	20098	20098
30°	20189	19634	19465
35°	19735	19072	18791
40°	19166	18510	18156
45°	18603	17954	17509
50°	17993	17374	16757
55°	17355	16701	16080
60°	16648	15893	15311
65°	15887	15094	14400
70°	14920	14123	13455
75°	13578	13012	12688
80°	12044	11682	11079
85°	9835	9354	8392

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18603 cd/sqm



TEST NUMBER: P242277

CATALOG NUMBER: S122DRP-S865D935-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.5	3.7
10°-20°	302.4	10.4
20°-30°	444.4	15.3
30°-40°	516.1	17.8
40°-50°	515.5	17.7
50°-60°	449.5	15.5
60°-70°	332.3	11.4
70°-80°	188.0	6.5
80°-90°	49.6	1.7
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°	854.2	29.4
0°-40°	1370.4	47.2
0°-60°	2335.3	80.4
0°-90°	2905.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2905.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1142	1142	1142	1142	1142	
5°	1142	1138	1125	1134	1132	108
15°	1087	1080	1066	1070	1065	306
25°	984	975	956	958	956	453
35°	849	838	820	814	808	530
45°	691	683	666	654	650	533
55°	523	516	503	490	484	467
65°	352	346	335	325	320	349
75°	184	182	177	170	172	197
85°	45	44	43	40	38	53
90°	0	0	0	0	0	



TEST NUMBER: P242277

CATALOG NUMBER: S122DRP-S865D935-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1141.9	1141.9	1141.9	1141.9	1141.9
2.5°	1148.5	1143.0	1130.9	1141.9	1139.7
5°	1141.9	1137.5	1125.4	1134.2	1132.0
7.5°	1134.2	1127.6	1115.6	1124.3	1122.1
10°	1122.1	1114.5	1101.3	1110.1	1106.8
12.5°	1105.7	1099.1	1085.9	1091.4	1089.2
15°	1087.0	1080.4	1066.1	1070.5	1065.0
17.5°	1064.0	1057.4	1043.1	1048.6	1043.1
20°	1038.7	1032.1	1016.7	1020.0	1015.6
22.5°	1013.4	1003.6	989.3	989.3	987.1
25°	983.8	975.0	956.3	958.5	956.3
27.5°	950.9	943.2	928.9	925.6	920.1
30°	917.9	909.1	892.7	889.4	885.0
32.5°	882.8	876.2	858.6	852.0	847.6
35°	848.7	837.8	820.2	813.6	808.1
37.5°	810.3	800.4	782.9	775.2	769.7
40°	770.8	762.0	744.4	734.6	730.2
42.5°	732.4	723.6	706.0	695.0	688.4
45°	690.6	682.9	666.5	654.4	650.0
47.5°	650.0	642.3	624.8	612.7	606.1
50°	607.2	601.7	586.3	571.0	565.5
52.5°	565.5	557.8	543.5	531.4	523.7
55°	522.6	516.1	502.9	489.7	484.2
57.5°	479.8	474.3	460.1	446.9	442.5
60°	437.0	432.6	417.2	405.2	401.9
62.5°	395.3	387.6	376.6	365.6	361.2
65°	352.5	345.9	334.9	325.0	319.5
67.5°	308.5	303.0	293.2	285.5	281.1
70°	267.9	263.5	253.6	245.9	241.6
72.5°	226.2	221.8	216.3	208.6	205.3
75°	184.5	182.3	176.8	170.2	172.4
77.5°	147.1	142.7	140.5	137.2	134.0
80°	109.8	108.7	106.5	103.2	101.0
82.5°	74.7	74.7	73.6	69.2	69.2
85°	45.0	43.9	42.8	39.5	38.4
87.5°	19.8	17.6	15.4	12.1	11.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242277
 CATALOG NUMBER: S122DRP-S865D935-X4F0-XX-UDD-F-W

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	21.98	23.59	22.35	23.91	24.22	21.54	23.15	21.90	23.46	23.78
	3H	23.73	25.19	24.11	25.51	25.87	23.24	24.70	23.62	25.02	25.38
	4H	24.38	25.75	24.78	26.10	26.47	23.88	25.25	24.28	25.60	25.98
	6H	24.85	26.12	25.26	26.48	26.87	24.35	25.62	24.76	25.98	26.37
	8H	24.99	26.20	25.42	26.59	26.99	24.49	25.70	24.91	26.09	26.49
	12H	25.08	26.24	25.51	26.62	27.05	24.57	25.73	25.00	26.11	26.54
4H	2H	22.54	23.91	22.94	24.26	24.64	22.19	23.56	22.59	23.91	24.28
	3H	24.52	25.66	24.93	26.06	26.46	24.11	25.26	24.52	25.66	26.06
	4H	25.29	26.33	25.73	26.74	27.18	24.87	25.91	25.30	26.32	26.76
	6H	25.89	26.80	26.34	27.24	27.69	25.46	26.36	25.91	26.80	27.26
	8H	26.08	26.93	26.54	27.37	27.83	25.64	26.49	26.10	26.93	27.40
	12H	26.21	26.97	26.69	27.45	27.92	25.76	26.52	26.24	27.00	27.47
8H	4H	25.57	26.41	26.03	26.86	27.32	25.19	26.04	25.65	26.48	26.95
	6H	26.28	26.98	26.78	27.47	27.95	25.90	26.60	26.39	27.09	27.57
	8H	26.54	27.17	27.05	27.68	28.16	26.15	26.78	26.66	27.29	27.77
	12H	26.74	27.30	27.25	27.79	28.35	26.33	26.89	26.83	27.38	27.94
12H	4H	25.59	26.35	26.07	26.83	27.30	25.23	25.99	25.71	26.46	26.93
	6H	26.33	26.96	26.84	27.47	27.95	25.96	26.59	26.47	27.10	27.58
	8H	26.64	27.20	27.15	27.69	28.25	26.26	26.82	26.77	27.31	27.87