

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: P242251

Luminaire Tested: S122DRP-S485D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242251
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-S485D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

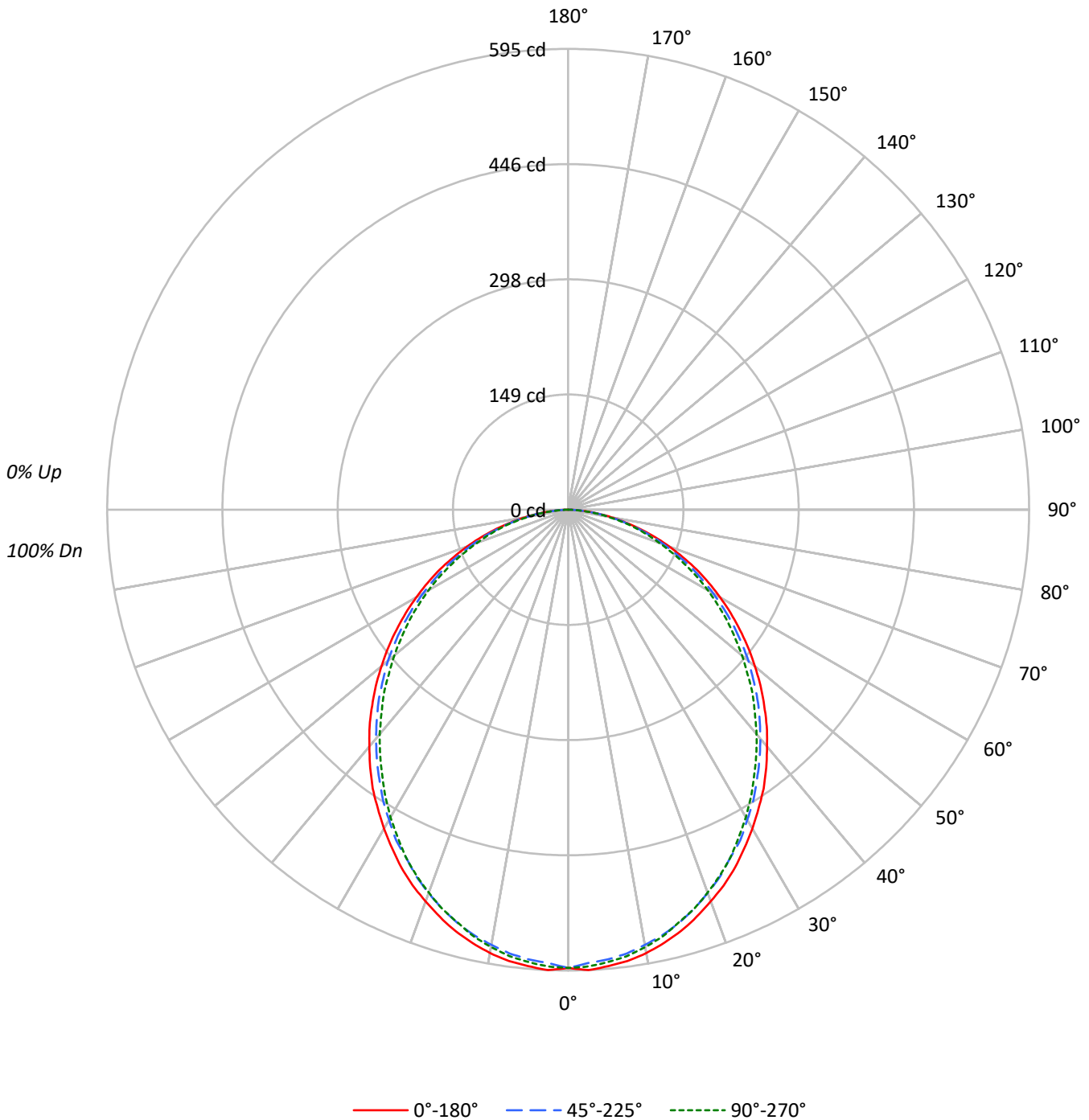
Lumens per Lamp: N/A
Luminaire Lumens: 1505.0 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11269	11269	11269
5°	11312	11147	11212
10°	11243	11034	11090
15°	11104	10891	10879
20°	10907	10676	10664
25°	10712	10412	10412
30°	10458	10170	10084
35°	10224	9880	9734
40°	9929	9590	9406
45°	9638	9302	9070
50°	9323	9000	8679
55°	8993	8651	8329
60°	8625	8232	7931
65°	8230	7820	7459
70°	7730	7318	6967
75°	7036	6741	6572
80°	6241	6055	5737
85°	5092	4852	4349

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9638 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	3.7
10°-20°	156.7	10.4
20°-30°	230.2	15.3
30°-40°	267.4	17.8
40°-50°	267.0	17.7
50°-60°	232.8	15.5
60°-70°	172.1	11.4
70°-80°	97.4	6.5
80°-90°	25.7	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°	442.5	29.4
0°-40°	709.9	47.2
0°-60°	1209.8	80.4
0°-90°	1505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	592	589	583	588	586	56
15°	563	560	552	555	552	159
25°	510	505	495	497	495	235
35°	440	434	425	422	419	275
45°	358	354	345	339	337	276
55°	271	267	260	254	251	242
65°	183	179	174	168	166	181
75°	96	94	92	88	89	102
85°	23	23	22	20	20	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	591.6	591.6	591.6	591.6	591.6
2.5°	595.0	592.1	585.9	591.6	590.4
5°	591.6	589.3	583.0	587.6	586.4
7.5°	587.6	584.2	577.9	582.5	581.3
10°	581.3	577.3	570.5	575.1	573.4
12.5°	572.8	569.4	562.6	565.4	564.3
15°	563.1	559.7	552.3	554.6	551.7
17.5°	551.2	547.8	540.4	543.2	540.4
20°	538.1	534.7	526.7	528.4	526.1
22.5°	525.0	519.9	512.5	512.5	511.4
25°	509.7	505.1	495.4	496.6	495.4
27.5°	492.6	488.6	481.2	479.5	476.7
30°	475.5	471.0	462.4	460.7	458.5
32.5°	457.3	453.9	444.8	441.4	439.1
35°	439.7	434.0	424.9	421.5	418.6
37.5°	419.8	414.7	405.6	401.6	398.7
40°	399.3	394.8	385.7	380.5	378.3
42.5°	379.4	374.8	365.7	360.1	356.6
45°	357.8	353.8	345.3	339.0	336.7
47.5°	336.7	332.8	323.7	317.4	314.0
50°	314.6	311.7	303.7	295.8	292.9
52.5°	292.9	289.0	281.6	275.3	271.3
55°	270.8	267.3	260.5	253.7	250.8
57.5°	248.6	245.7	238.3	231.5	229.2
60°	226.4	224.1	216.1	209.9	208.2
62.5°	204.8	200.8	195.1	189.4	187.1
65°	182.6	179.2	173.5	168.4	165.5
67.5°	159.8	157.0	151.9	147.9	145.6
70°	138.8	136.5	131.4	127.4	125.1
72.5°	117.2	114.9	112.1	108.1	106.4
75°	95.6	94.4	91.6	88.2	89.3
77.5°	76.2	73.9	72.8	71.1	69.4
80°	56.9	56.3	55.2	53.5	52.3
82.5°	38.7	38.7	38.1	35.8	35.8
85°	23.3	22.8	22.2	20.5	19.9
87.5°	10.2	9.1	8.0	6.3	5.7
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	19.70	21.31	20.06	21.62	21.94	19.25	20.86	19.62	21.18	21.49
	3H	21.45	22.90	21.82	23.23	23.59	20.96	22.41	21.33	22.74	23.10
	4H	22.09	23.46	22.49	23.81	24.19	21.60	22.97	22.00	23.32	23.69
	6H	22.56	23.83	22.97	24.20	24.59	22.06	23.33	22.47	23.69	24.09
	8H	22.71	23.92	23.13	24.31	24.70	22.20	23.41	22.63	23.80	24.20
	12H	22.80	23.96	23.23	24.34	24.77	22.28	23.44	22.71	23.82	24.25
4H	2H	20.26	21.63	20.66	21.97	22.35	19.90	21.27	20.30	21.62	22.00
	3H	22.23	23.38	22.64	23.78	24.18	21.83	22.97	22.24	23.37	23.77
	4H	23.01	24.04	23.44	24.46	24.89	22.59	23.62	23.02	24.03	24.47
	6H	23.61	24.51	24.06	24.95	25.41	23.17	24.08	23.63	24.52	24.98
	8H	23.79	24.64	24.26	25.08	25.55	23.36	24.20	23.82	24.65	25.11
	12H	23.93	24.69	24.41	25.16	25.63	23.47	24.23	23.95	24.71	25.18
8H	4H	23.28	24.13	23.74	24.57	25.04	22.91	23.76	23.37	24.20	24.66
	6H	24.00	24.70	24.49	25.19	25.66	23.62	24.32	24.11	24.81	25.28
	8H	24.26	24.89	24.77	25.39	25.88	23.86	24.49	24.37	25.00	25.49
	12H	24.46	25.01	24.96	25.50	26.07	24.04	24.60	24.55	25.09	25.65
12H	4H	23.31	24.07	23.79	24.54	25.01	22.94	23.70	23.42	24.18	24.65
	6H	24.04	24.67	24.55	25.18	25.67	23.67	24.31	24.18	24.81	25.30
	8H	24.36	24.91	24.86	25.40	25.97	23.98	24.54	24.48	25.03	25.59