

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: P242325

Luminaire Tested: S122DRP-S485D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242325
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S485D830-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

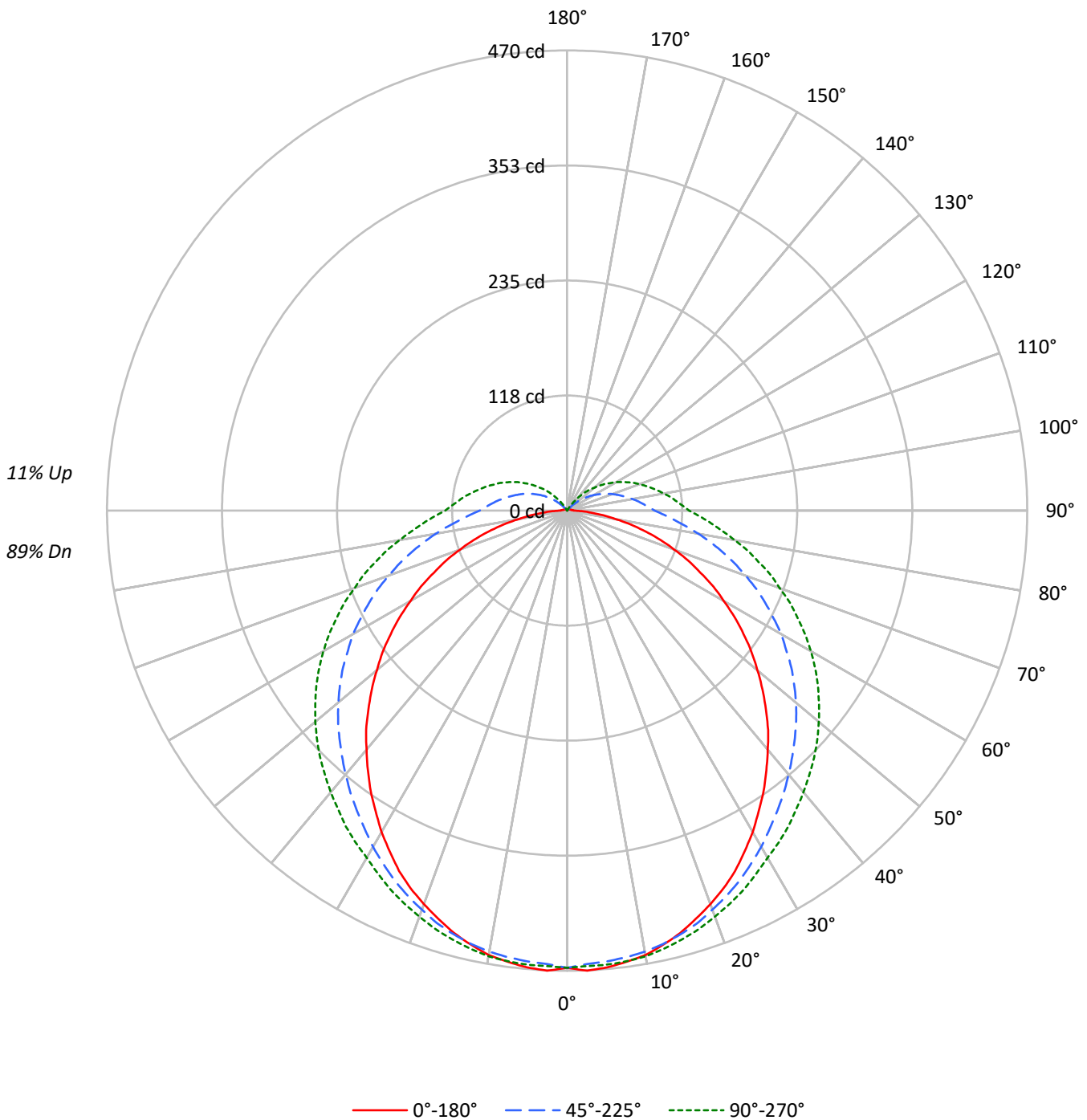
Lumens per Lamp: N/A
Luminaire Lumens: 1781.8 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72	69
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8895	8895	8895
5°	8937	8525	8479
10°	8881	8240	8121
15°	8758	7942	7754
20°	8602	7629	7405
25°	8450	7329	7086
30°	8234	7023	6771
35°	8016	6728	6542
40°	7786	6473	6313
45°	7568	6243	6115
50°	7333	6031	5918
55°	7088	5806	5718
60°	6787	5570	5506
65°	6471	5300	5264
70°	6121	5010	5002
75°	5668	4720	4755
80°	4967	4417	4498
85°	4280	4135	4280

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7568 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	2.5
10°-20°	127.0	7.1
20°-30°	192.4	10.8
30°-40°	234.3	13.1
40°-50°	252.0	14.1
50°-60°	244.8	13.7
60°-70°	213.8	12.0
70°-80°	164.5	9.2
80°-90°	110.2	6.2
90°-100°	76.0	4.3
100°-110°	55.5	3.1
110°-120°	36.7	2.1
120°-130°	20.4	1.1
130°-140°	8.6	0.5
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	363.6	20.4
0°-40°	597.9	33.6
0°-60°	1094.7	61.4
0°-90°	1583.2	88.9
90°-120°	168.2	9.4
90°-150°	198.6	11.1
90°-180°	199.0	11.2
0°-180°	1781.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	468	466	462	466	466	44
15°	447	448	448	454	453	126
25°	406	411	417	425	427	187
35°	350	361	374	389	394	219
45°	287	305	329	350	357	222
55°	220	244	280	304	313	197
65°	150	183	223	251	260	149
75°	83	121	164	194	202	88
85°	24	66	110	138	148	26
90°	7	46	89	116	124	5
95°	5	37	78	104	112	4
105°	3	23	58	82	89	4
115°	3	10	41	61	68	2
125°	1	1	23	41	47	1
135°	1	1	7	22	27	1
145°	0	0	0	4	7	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	467.0	467.0	467.0	467.0	467.0
2.5°	470.4	468.3	463.6	467.0	465.6
5°	468.3	466.3	462.2	466.3	465.6
7.5°	464.9	463.6	460.2	464.9	464.3
10°	460.9	459.5	457.5	462.9	462.2
12.5°	454.1	454.8	453.4	458.9	458.2
15°	446.7	448.0	448.0	454.1	453.4
17.5°	437.2	439.9	441.9	448.0	448.0
20°	427.7	431.1	433.8	441.3	441.3
22.5°	417.6	421.6	425.7	433.1	434.5
25°	406.1	410.8	416.9	425.0	427.0
27.5°	392.5	400.0	406.7	416.9	418.2
30°	379.0	387.8	396.6	407.4	409.4
32.5°	364.1	374.3	385.1	397.9	402.0
35°	349.9	361.4	374.3	389.1	393.9
37.5°	334.3	347.2	363.4	379.7	384.4
40°	318.8	333.6	351.9	369.5	375.6
42.5°	303.9	318.8	340.4	360.0	366.1
45°	287.0	305.2	328.9	349.9	356.7
47.5°	270.7	290.3	317.4	339.1	346.5
50°	253.8	274.8	305.2	328.2	335.7
52.5°	237.5	259.9	292.4	316.1	324.2
55°	220.0	244.3	279.5	303.9	312.7
57.5°	203.0	230.1	265.3	291.7	300.5
60°	184.8	213.9	252.4	278.2	287.6
62.5°	168.5	199.0	237.5	265.3	274.1
65°	150.2	183.4	223.3	251.1	259.9
67.5°	134.0	168.5	209.1	236.9	246.3
70°	116.4	151.6	193.6	222.7	230.8
72.5°	100.2	136.7	179.3	207.8	217.9
75°	83.2	121.1	164.5	193.6	202.4
77.5°	67.0	106.3	150.2	179.3	188.8
80°	50.8	92.0	136.0	164.5	173.9
82.5°	37.2	77.8	122.5	150.9	159.7
85°	24.4	66.3	109.6	138.1	147.5
87.5°	14.9	55.5	98.8	126.6	135.4
90°	6.8	46.0	89.3	116.4	124.5
92.5°	6.1	42.0	83.2	109.6	117.8
95°	5.4	37.2	77.8	103.5	111.7
97.5°	4.7	33.8	73.1	98.1	106.3
100°	4.7	29.8	67.7	92.7	100.2
102.5°	4.1	26.4	62.9	87.3	94.7
105°	3.4	23.0	58.2	81.9	89.3
107.5°	3.4	19.6	53.5	76.5	83.9
110°	2.7	16.2	49.4	71.1	78.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.7	13.5	44.7	66.3	73.8
115°	2.7	10.2	40.6	60.9	68.4
117.5°	2.0	7.4	35.9	56.2	62.9
120°	2.0	4.7	31.8	50.8	58.2
122.5°	2.0	2.7	27.7	46.0	52.1
125°	1.4	1.4	23.0	41.3	47.4
127.5°	1.4	0.7	18.9	35.9	42.0
130°	1.4	0.7	14.9	31.1	36.5
132.5°	1.4	0.7	10.8	26.4	31.8
135°	0.7	0.7	7.4	21.7	27.1
137.5°	0.7	0.7	4.1	16.9	21.7
140°	0.7	0.0	1.4	12.2	16.2
142.5°	0.7	0.0	0.0	8.1	11.5
145°	0.0	0.0	0.0	4.1	7.4
147.5°	0.0	0.0	0.0	0.7	2.7
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	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	15.81	17.29	16.34	17.82	18.40	18.88	20.36	19.40	20.88	21.46
	3H	17.31	18.67	17.85	19.20	19.82	21.50	22.86	22.04	23.39	24.01
	4H	17.81	19.10	18.37	19.65	20.28	22.78	24.07	23.34	24.62	25.25
	6H	18.13	19.33	18.70	19.89	20.54	24.11	25.31	24.69	25.88	26.52
	8H	18.20	19.35	18.79	19.94	20.59	24.79	25.94	25.38	26.53	27.18
	12H	18.24	19.34	18.83	19.93	20.61	25.55	26.65	26.14	27.23	27.91
4H	2H	16.92	18.21	17.48	18.76	19.39	19.27	20.55	19.82	21.10	21.73
	3H	18.68	19.78	19.25	20.37	21.02	22.11	23.21	22.68	23.80	24.45
	4H	19.33	20.34	19.92	20.94	21.62	23.55	24.56	24.14	25.16	25.84
	6H	19.78	20.67	20.38	21.30	21.99	25.06	25.95	25.66	26.58	27.27
	8H	19.90	20.74	20.52	21.37	22.08	25.83	26.68	26.45	27.30	28.01
	12H	19.98	20.74	20.61	21.40	22.11	26.70	27.47	27.34	28.12	28.83
8H	4H	20.17	21.01	20.78	21.64	22.34	23.74	24.59	24.36	25.21	25.92
	6H	20.83	21.55	21.47	22.21	22.92	25.40	26.12	26.05	26.79	27.50
	8H	21.06	21.71	21.72	22.38	23.10	26.31	26.96	26.97	27.63	28.35
	12H	21.22	21.80	21.88	22.47	23.25	27.34	27.92	28.00	28.58	29.37
12H	4H	20.40	21.16	21.03	21.82	22.53	23.75	24.52	24.38	25.17	25.88
	6H	21.17	21.82	21.83	22.49	23.22	25.44	26.09	26.09	26.76	27.48
	8H	21.51	22.09	22.17	22.75	23.54	26.40	26.98	27.06	27.65	28.43