

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: P243524

Luminaire Tested: S124DRP-H575D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243524
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H575D927-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

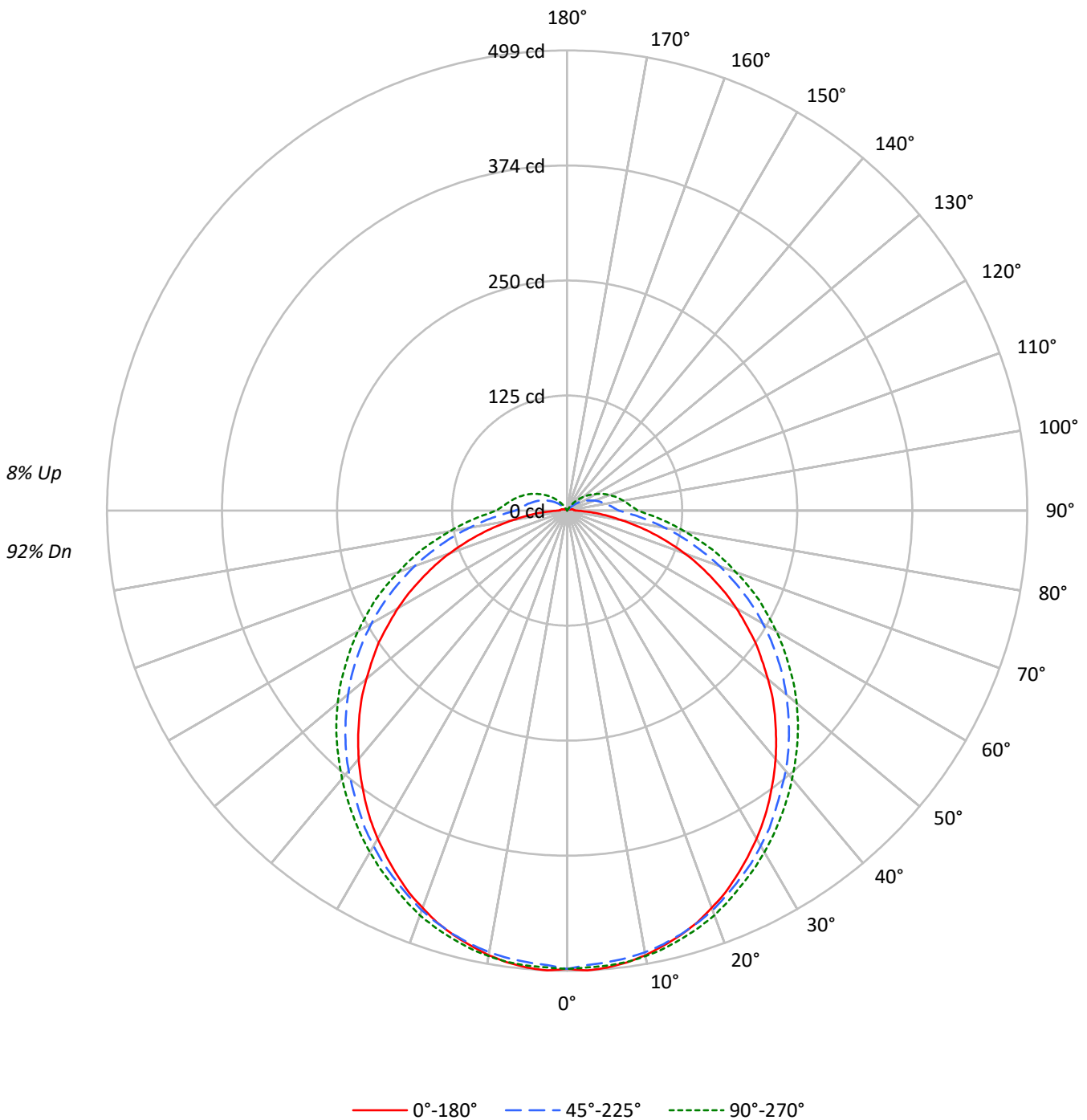
Lumens per Lamp: N/A
Luminaire Lumens: 1698.8 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 17.2
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4418	4418	4418
5°	4431	4311	4320
10°	4402	4238	4229
15°	4359	4152	4128
20°	4303	4061	4026
25°	4236	3954	3907
30°	4166	3856	3805
35°	4088	3746	3699
40°	4009	3653	3600
45°	3926	3552	3506
50°	3831	3449	3408
55°	3748	3341	3295
60°	3630	3221	3186
65°	3494	3084	3074
70°	3330	2931	2916
75°	3071	2741	2801
80°	2724	2558	2637
85°	2464	2411	2542

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3926 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.1	2.8
10°-20°	134.9	7.9
20°-30°	204.2	12.0
30°-40°	247.3	14.6
40°-50°	261.5	15.4
50°-60°	246.4	14.5
60°-70°	204.8	12.1
70°-80°	143.9	8.5
80°-90°	81.1	4.8
90°-100°	48.1	2.8
100°-110°	35.6	2.1
110°-120°	23.8	1.4
120°-130°	13.4	0.8
130°-140°	5.7	0.3
140°-150°	1.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	386.2	22.7
0°-40°	633.5	37.3
0°-60°	1141.4	67.2
0°-90°	1571.1	92.5
90°-120°	107.5	6.3
90°-150°	127.7	7.5
90°-180°	128.0	7.5
0°-180°	1698.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	498	495	492	496	495	47
15°	476	477	476	481	481	134
25°	436	440	442	448	448	201
35°	382	389	394	403	404	239
45°	319	329	340	350	353	246
55°	249	262	278	290	294	222
65°	174	191	211	224	230	172
75°	97	117	140	156	163	102
85°	30	53	79	96	101	31
90°	9	31	56	71	77	6
95°	7	25	49	64	68	6
105°	5	16	37	51	56	6
115°	4	8	26	38	43	4
125°	2	2	15	26	30	2
135°	1	1	5	14	17	1
145°	0	0	0	3	5	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°	497.0	497.0	497.0	497.0	497.0
2.5°	499.1	497.5	493.3	496.4	495.9
5°	497.5	495.4	491.7	495.9	495.4
7.5°	494.3	492.7	489.6	494.3	493.8
10°	489.6	488.5	486.4	490.6	490.6
12.5°	483.2	483.2	481.7	486.4	486.4
15°	476.4	477.4	475.8	481.1	480.6
17.5°	468.5	469.5	469.0	474.3	474.3
20°	458.4	460.0	461.1	466.9	466.9
22.5°	448.4	450.5	451.6	457.9	457.9
25°	436.2	439.9	441.5	447.9	447.9
27.5°	423.6	428.3	431.5	437.3	438.4
30°	410.9	416.2	419.9	426.2	427.8
32.5°	397.2	402.4	408.2	414.6	416.7
35°	382.4	388.7	394.5	403.0	404.5
37.5°	367.1	374.4	381.3	390.3	392.4
40°	351.7	360.7	368.6	377.1	379.7
42.5°	335.4	344.3	354.9	363.9	366.5
45°	319.0	329.0	340.1	350.2	353.3
47.5°	302.6	313.2	325.3	335.9	339.6
50°	284.1	295.8	310.0	320.6	324.8
52.5°	266.2	278.9	294.7	305.3	310.0
55°	249.3	262.5	278.3	290.5	293.6
57.5°	229.7	244.5	262.0	275.2	278.3
60°	211.8	226.6	245.1	258.3	262.0
62.5°	193.3	209.1	228.2	241.4	245.1
65°	173.8	191.2	210.7	223.9	229.7
67.5°	154.7	172.2	192.8	207.6	212.3
70°	135.7	153.7	175.9	190.7	194.4
72.5°	115.7	135.2	157.9	173.2	178.5
75°	96.6	117.2	140.5	156.3	162.7
77.5°	78.2	99.8	124.1	140.5	144.7
80°	59.7	83.4	107.7	124.1	129.4
82.5°	44.9	67.1	92.4	109.9	114.1
85°	30.1	53.3	78.7	95.6	100.9
87.5°	18.0	41.7	66.0	81.9	87.1
90°	9.0	31.2	56.0	71.3	76.6
92.5°	7.9	28.0	51.8	67.1	72.4
95°	7.4	25.4	48.6	63.9	68.1
97.5°	6.9	23.2	45.4	60.2	65.0
100°	6.3	20.6	42.8	57.0	61.8
102.5°	5.8	18.5	39.6	53.9	58.6
105°	5.3	16.4	37.0	50.7	55.5
107.5°	4.8	14.3	34.3	47.5	52.3
110°	4.2	12.1	31.7	44.4	49.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	10.6	28.5	41.2	45.9
115°	3.7	8.5	25.9	38.0	42.8
117.5°	3.2	6.3	23.2	34.9	39.1
120°	3.2	4.8	20.6	31.7	35.9
122.5°	2.6	3.2	18.0	29.0	32.7
125°	2.1	1.6	15.3	25.9	29.6
127.5°	2.1	1.6	12.7	22.7	26.4
130°	1.6	1.6	10.0	19.5	23.2
132.5°	1.6	1.1	7.4	16.9	20.1
135°	1.1	1.1	4.8	13.7	16.9
137.5°	1.1	0.5	3.2	11.1	14.3
140°	1.1	0.5	1.1	8.5	11.1
142.5°	0.5	0.5	0.0	5.8	7.9
145°	0.5	0.0	0.0	3.2	5.3
147.5°	0.5	0.0	0.0	0.5	2.6
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	14.95	16.48	15.43	16.94	17.44	16.53	18.06	17.01	18.52	19.02
	3H	16.60	17.99	17.09	18.46	19.00	18.84	20.23	19.33	20.71	21.25
	4H	17.17	18.49	17.68	18.98	19.53	19.91	21.23	20.42	21.72	22.27
	6H	17.55	18.78	18.08	19.29	19.85	20.96	22.19	21.48	22.69	23.26
	8H	17.66	18.84	18.20	19.37	19.94	21.47	22.65	22.01	23.18	23.75
	12H	17.72	18.85	18.27	19.37	19.98	22.03	23.15	22.57	23.68	24.28
4H	2H	15.81	17.12	16.32	17.62	18.17	17.03	18.35	17.54	18.84	19.39
	3H	17.69	18.82	18.22	19.35	19.92	19.57	20.69	20.09	21.22	21.80
	4H	18.41	19.43	18.95	19.98	20.58	20.79	21.82	21.34	22.36	22.97
	6H	18.92	19.83	19.49	20.40	21.02	22.02	22.92	22.58	23.49	24.11
	8H	19.08	19.93	19.65	20.50	21.13	22.62	23.47	23.19	24.05	24.68
	12H	19.18	19.95	19.77	20.55	21.19	23.29	24.06	23.88	24.66	25.29
8H	4H	18.99	19.84	19.56	20.41	21.04	21.05	21.90	21.62	22.47	23.10
	6H	19.68	20.40	20.28	21.01	21.65	22.43	23.15	23.03	23.76	24.40
	8H	19.93	20.58	20.54	21.20	21.85	23.17	23.82	23.78	24.44	25.09
	12H	20.12	20.70	20.73	21.31	22.03	24.00	24.57	24.61	25.19	25.90
12H	4H	19.12	19.89	19.71	20.49	21.13	21.06	21.83	21.65	22.43	23.07
	6H	19.89	20.54	20.51	21.16	21.82	22.48	23.13	23.09	23.75	24.40
	8H	20.23	20.81	20.85	21.42	22.14	23.29	23.86	23.90	24.48	25.19