

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: P242664

Luminaire Tested: S124DRP-S575D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S575D927-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

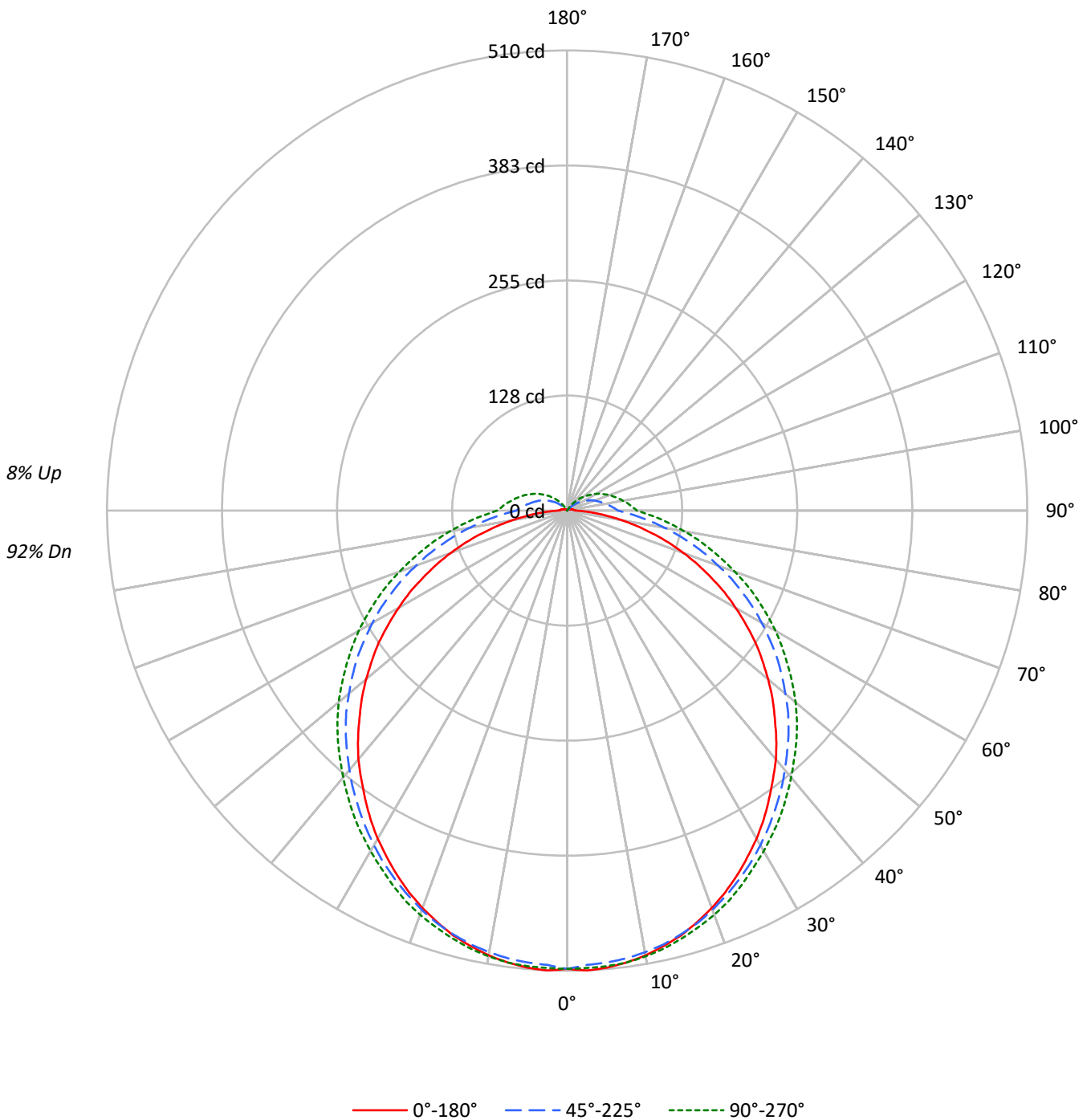
Lumens per Lamp: N/A
Luminaire Lumens: 1731.8 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 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	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	87	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	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	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	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4515	4515	4515
5°	4529	4408	4419
10°	4501	4331	4325
15°	4461	4243	4216
20°	4399	4148	4110
25°	4330	4040	3994
30°	4256	3933	3875
35°	4171	3824	3771
40°	4104	3720	3662
45°	4004	3624	3568
50°	3920	3513	3468
55°	3831	3407	3351
60°	3695	3273	3245
65°	3545	3131	3112
70°	3364	2966	2961
75°	3109	2786	2820
80°	2829	2607	2677
85°	2464	2439	2580

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4004 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	2.8
10°-20°	137.9	8.0
20°-30°	208.5	12.0
30°-40°	252.2	14.6
40°-50°	266.7	15.4
50°-60°	251.0	14.5
60°-70°	208.3	12.0
70°-80°	146.2	8.4
80°-90°	82.4	4.8
90°-100°	49.0	2.8
100°-110°	36.3	2.1
110°-120°	24.4	1.4
120°-130°	13.7	0.8
130°-140°	5.9	0.3
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	394.5	22.8
0°-40°	646.8	37.3
0°-60°	1164.4	67.2
0°-90°	1601.2	92.5
90°-120°	109.7	6.3
90°-150°	130.6	7.5
90°-180°	131.0	7.6
0°-180°	1731.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	508	508	508	508	508	
5°	508	507	503	507	507	48
15°	488	488	486	491	491	137
25°	446	449	451	457	458	205
35°	390	397	403	411	412	244
45°	325	336	347	357	360	251
55°	255	267	284	295	299	227
65°	176	194	214	228	233	175
75°	98	119	143	159	164	104
85°	30	54	80	97	102	31
90°	9	32	56	73	77	6
95°	7	26	50	65	70	6
105°	5	16	38	52	56	6
115°	3	8	27	39	43	4
125°	2	2	16	27	30	2
135°	1	1	5	14	18	1
145°	1	0	0	3	6	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°	507.9	507.9	507.9	507.9	507.9
2.5°	510.2	508.5	504.0	507.9	507.4
5°	508.5	506.8	502.8	507.4	506.8
7.5°	505.1	504.0	500.6	505.7	505.1
10°	500.6	500.0	497.1	502.3	501.7
12.5°	494.3	494.3	492.6	497.1	497.1
15°	487.5	488.0	486.3	491.4	490.9
17.5°	478.4	480.1	479.5	484.6	484.1
20°	468.7	470.4	471.0	476.7	476.7
22.5°	457.9	460.2	461.3	467.0	468.1
25°	445.9	449.4	451.1	457.3	457.9
27.5°	432.9	438.0	440.3	445.9	446.5
30°	419.8	424.3	428.3	434.6	435.7
32.5°	405.6	411.2	415.8	423.2	424.3
35°	390.2	397.0	402.7	410.7	412.4
37.5°	374.8	382.8	389.6	397.6	399.3
40°	360.1	367.4	375.4	383.9	386.2
42.5°	343.0	351.5	361.2	370.9	372.6
45°	325.4	336.2	347.0	356.6	359.5
47.5°	308.9	319.7	332.2	341.9	345.3
50°	290.7	303.2	315.7	327.1	330.5
52.5°	272.5	285.0	299.8	311.1	314.6
55°	254.8	266.8	283.8	295.2	298.6
57.5°	234.9	249.7	266.2	279.9	282.7
60°	215.6	230.4	249.1	262.2	266.8
62.5°	196.8	213.3	232.1	245.2	249.7
65°	176.3	194.5	213.9	228.1	232.6
67.5°	157.0	176.3	196.8	211.0	215.6
70°	137.1	156.4	178.0	193.4	197.4
72.5°	117.7	137.7	161.0	175.8	180.3
75°	97.8	118.9	142.8	158.7	163.8
77.5°	79.1	101.2	126.3	142.2	147.9
80°	62.0	84.8	109.8	126.8	131.4
82.5°	44.9	68.8	93.9	111.5	116.6
85°	30.1	54.0	79.6	96.7	102.4
87.5°	18.8	42.1	67.1	83.6	88.7
90°	9.1	31.9	56.3	72.8	77.4
92.5°	8.5	28.4	52.9	68.8	73.4
95°	7.4	26.2	49.5	64.8	70.0
97.5°	6.8	23.3	46.6	61.4	66.6
100°	6.3	21.0	43.2	58.6	62.6
102.5°	6.3	18.8	40.4	55.2	59.7
105°	5.1	16.5	37.5	51.8	56.3
107.5°	5.1	14.8	34.7	48.9	52.9
110°	4.6	12.5	32.4	45.5	50.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	10.8	29.6	42.1	46.6
115°	3.4	8.5	26.7	39.2	43.2
117.5°	3.4	6.8	23.9	35.8	40.4
120°	2.8	4.6	21.0	32.4	37.0
122.5°	2.8	2.8	18.2	29.6	33.6
125°	2.3	1.7	15.9	26.7	30.1
127.5°	2.3	1.7	13.1	23.3	27.3
130°	1.7	1.1	10.2	20.5	23.9
132.5°	1.7	1.1	8.0	17.6	21.0
135°	1.1	1.1	5.1	14.2	17.6
137.5°	1.1	0.6	2.8	11.4	14.2
140°	1.1	0.6	1.1	8.5	11.4
142.5°	0.6	0.6	0.0	6.3	8.5
145°	0.6	0.0	0.0	3.4	5.7
147.5°	0.6	0.0	0.0	0.6	2.8
150°	0.6	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	15.03	16.55	15.51	17.02	17.52	16.58	18.11	17.06	18.57	19.07
	3H	16.67	18.06	17.16	18.53	19.07	18.89	20.28	19.38	20.75	21.29
	4H	17.23	18.55	17.74	19.04	19.59	19.95	21.26	20.46	21.76	22.31
	6H	17.62	18.84	18.14	19.35	19.92	21.00	22.23	21.53	22.73	23.30
	8H	17.72	18.90	18.26	19.43	20.00	21.52	22.69	22.06	23.22	23.80
	12H	17.78	18.91	18.33	19.43	20.04	22.07	23.20	22.62	23.72	24.33
4H	2H	15.88	17.19	16.39	17.69	18.24	17.08	18.40	17.59	18.89	19.44
	3H	17.76	18.88	18.28	19.41	19.99	19.61	20.73	20.13	21.27	21.84
	4H	18.46	19.49	19.01	20.03	20.64	20.83	21.85	21.37	22.40	23.00
	6H	18.98	19.88	19.54	20.45	21.07	22.06	22.96	22.62	23.53	24.15
	8H	19.13	19.98	19.70	20.56	21.19	22.67	23.52	23.24	24.09	24.72
	12H	19.24	20.01	19.83	20.61	21.24	23.33	24.10	23.92	24.70	25.34
8H	4H	19.04	19.89	19.61	20.46	21.09	21.08	21.93	21.65	22.50	23.13
	6H	19.73	20.45	20.34	21.07	21.70	22.47	23.19	23.08	23.81	24.44
	8H	19.99	20.63	20.60	21.26	21.91	23.22	23.86	23.83	24.49	25.14
	12H	20.17	20.75	20.79	21.36	22.08	24.04	24.62	24.66	25.23	25.95
12H	4H	19.18	19.95	19.77	20.55	21.18	21.10	21.87	21.69	22.47	23.11
	6H	19.95	20.60	20.56	21.22	21.87	22.52	23.17	23.14	23.80	24.45
	8H	20.29	20.86	20.90	21.48	22.19	23.33	23.91	23.95	24.52	25.24