

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: P243726

Luminaire Tested: S125DRP-H850D940-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243726
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-56)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-H850D940-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

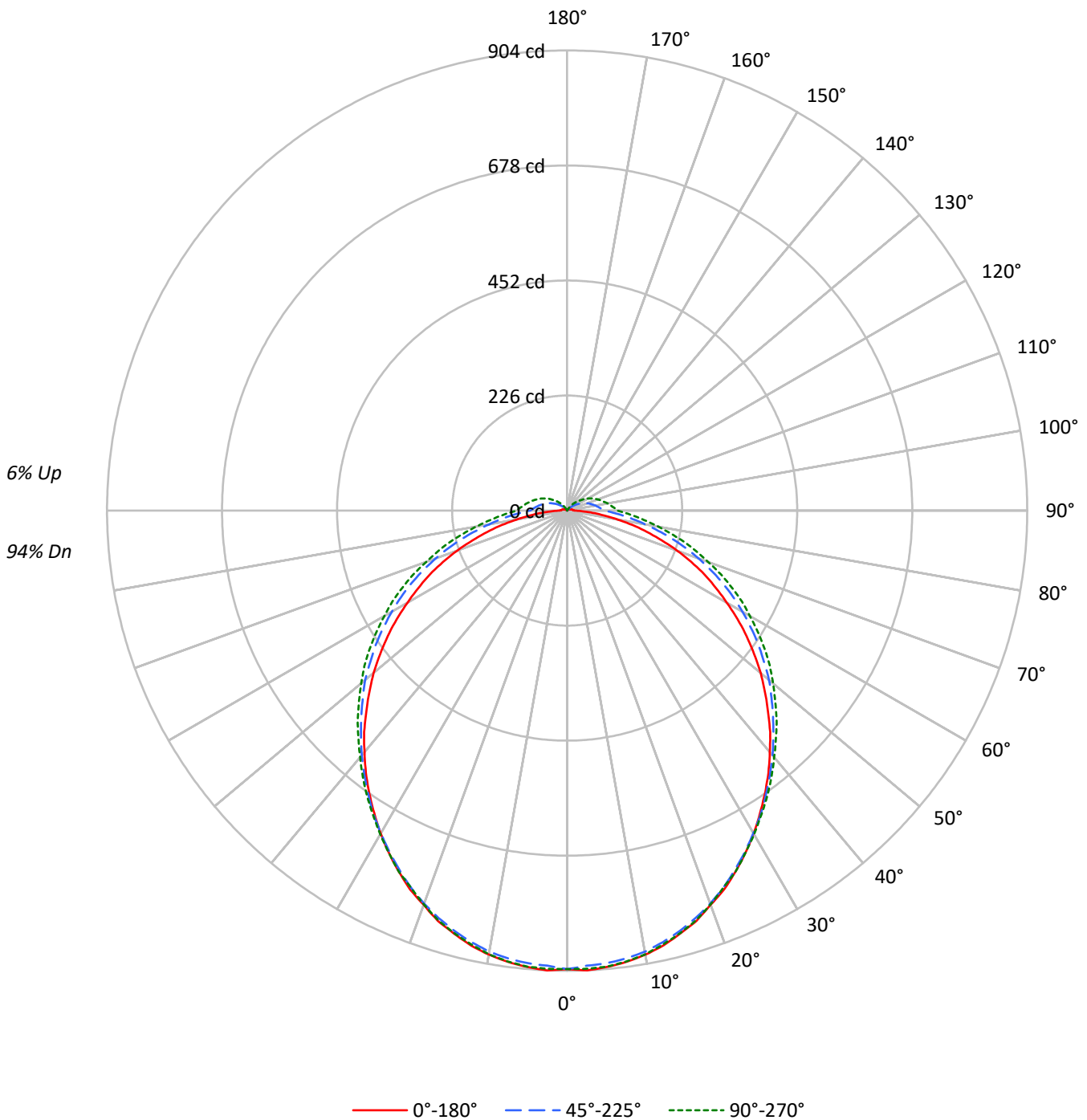
Lumens per Lamp: N/A
Luminaire Lumens: 2797.1 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 23.6
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			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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6402	6402	6402
5°	6409	6276	6298
10°	6369	6170	6156
15°	6292	6024	5980
20°	6185	5861	5779
25°	6076	5672	5582
30°	5939	5481	5366
35°	5793	5293	5173
40°	5645	5113	4980
45°	5489	4931	4822
50°	5349	4781	4654
55°	5174	4595	4500
60°	4964	4394	4304
65°	4792	4182	4112
70°	4509	3921	3862
75°	4128	3614	3641
80°	3674	3283	3363
85°	3273	3071	3201

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5489 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	3.0
10°-20°	242.2	8.7
20°-30°	360.5	12.9
30°-40°	427.1	15.3
40°-50°	441.9	15.8
50°-60°	407.6	14.6
60°-70°	329.4	11.8
70°-80°	220.1	7.9
80°-90°	113.5	4.1
90°-100°	63.7	2.3
100°-110°	47.3	1.7
110°-120°	31.5	1.1
120°-130°	17.6	0.6
130°-140°	7.9	0.3
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	687.9	24.6
0°-40°	1115.0	39.9
0°-60°	1964.5	70.2
0°-90°	2627.6	93.9
90°-120°	142.4	5.1
90°-150°	169.6	6.1
90°-180°	170.0	6.1
0°-180°	2797.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	901	901	901	901	901	
5°	900	899	892	899	899	85
15°	860	862	855	860	859	243
25°	783	786	779	784	783	360
35°	678	683	681	684	685	424
45°	558	567	572	581	582	431
55°	430	444	459	470	474	385
65°	298	316	337	352	356	294
75°	162	186	213	232	238	172
85°	50	78	109	128	135	51
90°	14	42	72	92	99	10
95°	12	35	64	83	89	9
105°	8	22	49	67	72	9
115°	6	12	34	50	56	5
125°	3	3	20	32	38	3
135°	2	2	8	19	22	1
145°	1	0	0	5	8	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°	900.8	900.8	900.8	900.8	900.8
2.5°	904.2	901.7	895.0	901.7	900.8
5°	900.0	899.2	892.5	899.2	899.2
7.5°	894.2	893.4	887.5	894.2	893.4
10°	885.9	885.9	880.0	885.0	885.0
12.5°	875.0	875.0	868.4	874.2	872.5
15°	860.0	862.5	855.1	860.0	859.2
17.5°	845.1	845.1	839.2	843.4	843.4
20°	824.2	827.6	821.7	825.9	823.4
22.5°	805.9	807.6	801.8	805.9	801.8
25°	782.6	785.9	779.3	783.5	782.6
27.5°	758.5	761.0	756.0	761.0	758.5
30°	732.7	735.2	731.8	735.2	734.3
32.5°	705.2	710.2	707.7	710.2	709.4
35°	677.7	682.7	681.0	684.4	685.2
37.5°	649.4	654.4	654.4	658.6	659.4
40°	619.4	626.1	627.8	633.6	632.8
42.5°	590.3	597.0	599.5	606.9	606.9
45°	557.8	567.0	572.0	581.1	582.0
47.5°	527.0	537.0	544.5	552.8	554.5
50°	496.2	505.4	517.9	526.2	527.9
52.5°	462.9	474.6	487.1	498.7	502.0
55°	430.4	443.8	458.7	469.6	473.7
57.5°	397.1	411.3	427.9	441.3	444.6
60°	362.2	378.8	398.0	411.3	414.6
62.5°	329.7	348.0	368.0	382.2	387.1
65°	298.1	315.5	337.2	352.2	356.3
67.5°	263.9	283.1	305.6	322.2	326.4
70°	229.8	250.6	274.7	290.6	294.7
72.5°	194.8	218.1	243.9	261.4	266.4
75°	162.4	186.5	213.1	231.5	238.1
77.5°	131.5	156.5	183.2	202.3	208.1
80°	100.7	126.6	155.7	175.7	181.5
82.5°	73.3	100.7	130.7	150.7	156.5
85°	50.0	78.3	109.1	128.2	134.9
87.5°	30.8	58.3	89.9	109.1	115.7
90°	14.2	41.6	72.4	92.4	99.1
92.5°	12.5	38.3	68.3	88.3	94.1
95°	11.7	35.0	64.1	83.3	89.1
97.5°	10.8	31.6	59.9	79.1	84.9
100°	10.0	28.3	56.6	74.9	80.8
102.5°	9.2	25.8	52.5	70.8	75.8
105°	8.3	22.5	49.1	66.6	72.4
107.5°	7.5	19.1	45.8	62.4	68.3
110°	6.7	16.7	41.6	58.3	64.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.8	14.2	38.3	54.1	59.9
115°	5.8	11.7	34.1	50.0	55.8
117.5°	5.0	9.2	30.0	45.8	51.6
120°	4.2	6.7	26.6	41.6	47.5
122.5°	4.2	5.0	23.3	37.5	43.3
125°	3.3	3.3	20.0	32.5	38.3
127.5°	3.3	2.5	16.7	29.1	33.3
130°	2.5	1.7	14.2	25.8	30.0
132.5°	2.5	1.7	10.8	22.5	26.6
135°	1.7	1.7	7.5	19.1	22.5
137.5°	1.7	0.8	5.0	15.0	19.1
140°	0.8	0.8	1.7	11.7	15.0
142.5°	0.8	0.8	0.8	8.3	11.7
145°	0.8	0.0	0.0	5.0	7.5
147.5°	0.8	0.0	0.0	1.7	4.2
150°	0.0	0.0	0.0	0.0	0.8
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	16.36	17.90	16.82	18.34	18.80	17.45	18.99	17.91	19.43	19.89
	3H	18.01	19.41	18.48	19.86	20.36	19.62	21.01	20.09	21.46	21.97
	4H	18.58	19.90	19.07	20.37	20.89	20.58	21.90	21.07	22.37	22.89
	6H	18.97	20.20	19.47	20.68	21.21	21.48	22.71	21.99	23.19	23.73
	8H	19.08	20.25	19.59	20.75	21.29	21.91	23.09	22.43	23.59	24.13
	12H	19.14	20.26	19.66	20.76	21.33	22.37	23.49	22.89	23.99	24.56
4H	2H	17.13	18.45	17.62	18.92	19.43	17.98	19.30	18.47	19.77	20.29
	3H	19.01	20.13	19.51	20.64	21.18	20.36	21.48	20.87	21.99	22.53
	4H	19.71	20.73	20.24	21.26	21.83	21.47	22.49	22.00	23.02	23.59
	6H	20.23	21.12	20.77	21.67	22.26	22.54	23.44	23.09	23.99	24.58
	8H	20.38	21.22	20.93	21.77	22.37	23.06	23.90	23.61	24.45	25.05
	12H	20.48	21.25	21.06	21.82	22.43	23.61	24.37	24.18	24.95	25.56
8H	4H	20.20	21.04	20.75	21.59	22.19	21.73	22.57	22.28	23.12	23.72
	6H	20.86	21.57	21.45	22.17	22.77	22.95	23.66	23.54	24.25	24.86
	8H	21.11	21.74	21.70	22.35	22.97	23.59	24.23	24.18	24.83	25.45
	12H	21.29	21.86	21.89	22.45	23.14	24.30	24.86	24.89	25.46	26.14
12H	4H	20.30	21.06	20.87	21.64	22.24	21.75	22.51	22.32	23.09	23.70
	6H	21.03	21.67	21.62	22.27	22.89	23.00	23.64	23.60	24.25	24.87
	8H	21.34	21.91	21.94	22.50	23.19	23.70	24.27	24.30	24.86	25.55