

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: P242851

Luminaire Tested: S125DRP-S850D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242851
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-S850D840-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

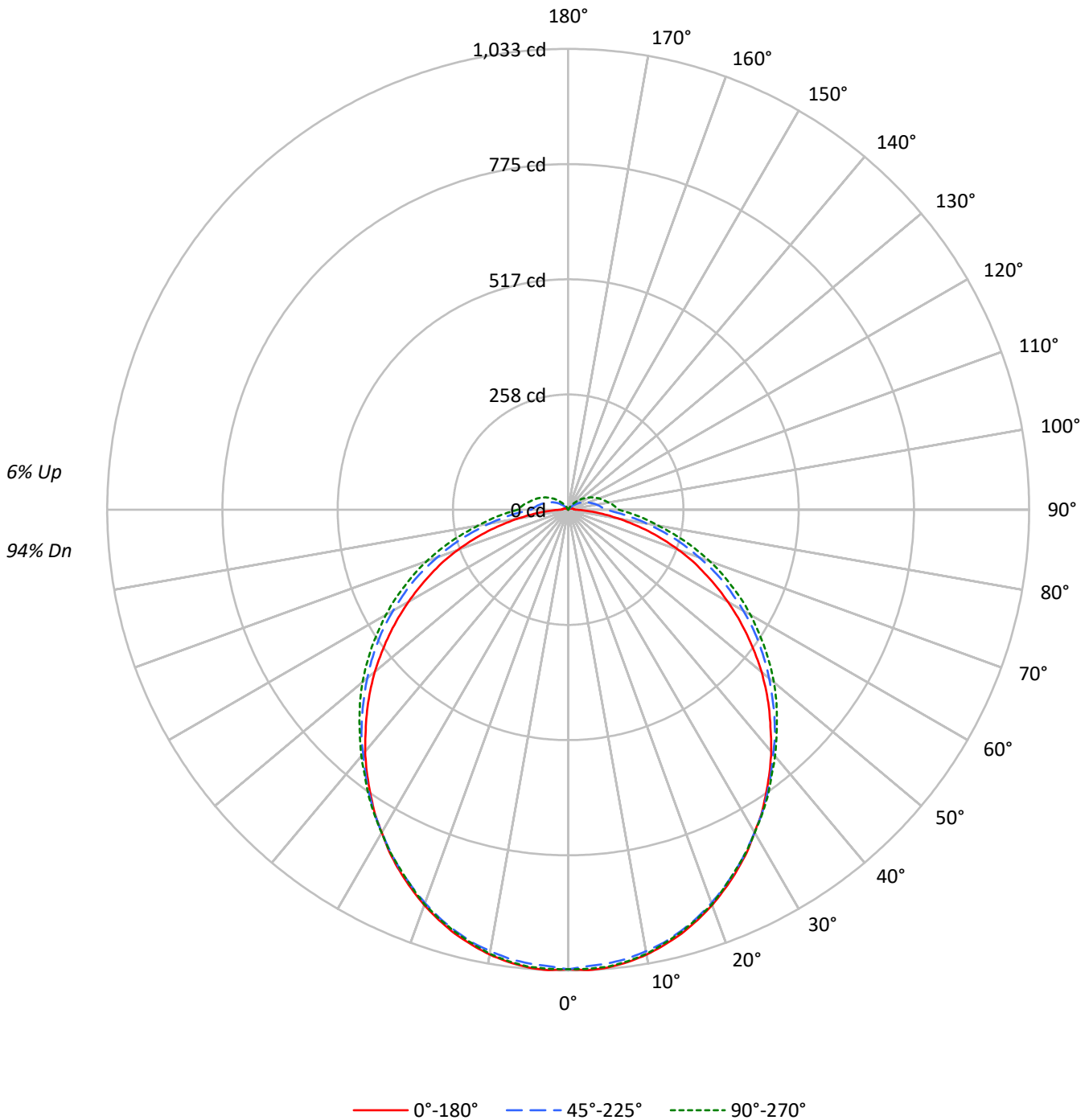
Lumens per Lamp: N/A
Luminaire Lumens: 3190.9 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 26.4
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	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°	7321	7321	7321
5°	7335	7180	7200
10°	7282	7045	7031
15°	7196	6886	6818
20°	7078	6692	6606
25°	6939	6483	6346
30°	6770	6255	6110
35°	6613	6044	5893
40°	6451	5823	5674
45°	6270	5633	5480
50°	6097	5425	5307
55°	5888	5230	5103
60°	5660	5006	4896
65°	5422	4773	4661
70°	5153	4453	4420
75°	4723	4144	4123
80°	4162	3768	3798
85°	3633	3496	3666

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6270 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	3.1
10°-20°	276.7	8.7
20°-30°	411.5	12.9
30°-40°	487.3	15.3
40°-50°	503.8	15.8
50°-60°	464.1	14.5
60°-70°	375.2	11.8
70°-80°	251.0	7.9
80°-90°	129.8	4.1
90°-100°	73.1	2.3
100°-110°	53.9	1.7
110°-120°	36.1	1.1
120°-130°	20.4	0.6
130°-140°	8.9	0.3
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	785.6	24.6
0°-40°	1273.0	39.9
0°-60°	2240.8	70.2
0°-90°	2996.8	93.9
90°-120°	163.0	5.1
90°-150°	194.1	6.1
90°-180°	194.0	6.1
0°-180°	3190.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1030	1028	1021	1029	1028	98
15°	984	985	978	984	980	277
25°	894	897	891	895	890	411
35°	774	781	778	781	781	484
45°	637	648	653	660	662	492
55°	490	506	522	533	537	438
65°	337	360	385	400	404	335
75°	186	212	244	265	270	197
85°	56	89	124	146	154	58
90°	16	48	83	106	113	11
95°	13	39	74	96	103	10
105°	9	25	56	76	83	10
115°	6	13	39	58	64	6
125°	4	3	23	39	44	3
135°	2	1	8	21	26	2
145°	1	0	0	5	9	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°	1030.1	1030.1	1030.1	1030.1	1030.1
2.5°	1033.1	1031.1	1024.0	1031.1	1030.1
5°	1030.1	1028.0	1021.0	1029.1	1028.0
7.5°	1023.0	1022.0	1014.9	1022.0	1021.0
10°	1012.9	1012.9	1004.8	1011.9	1010.9
12.5°	998.8	999.8	993.7	998.8	995.7
15°	983.6	984.6	977.5	983.6	979.6
17.5°	964.4	966.4	959.4	964.4	961.4
20°	943.2	945.2	938.2	941.2	941.2
22.5°	919.0	923.0	914.9	919.0	915.9
25°	893.7	896.8	890.7	894.7	889.7
27.5°	866.5	870.5	863.4	866.5	864.4
30°	835.2	841.2	835.2	837.2	836.2
32.5°	806.9	811.9	807.9	809.9	808.9
35°	773.6	780.6	777.6	780.6	780.6
37.5°	741.2	747.3	746.3	750.3	749.3
40°	707.9	716.0	715.0	719.0	721.0
42.5°	671.6	682.7	685.7	690.7	690.7
45°	637.2	648.3	653.4	660.5	661.5
47.5°	601.9	612.0	620.1	630.2	632.2
50°	565.5	576.6	587.7	598.8	601.9
52.5°	527.1	541.3	555.4	567.5	569.6
55°	489.8	505.9	522.1	533.2	537.2
57.5°	451.4	470.6	488.8	500.9	503.9
60°	413.0	433.2	453.4	468.6	471.6
62.5°	375.7	395.9	418.1	435.3	439.3
65°	337.3	360.5	384.8	399.9	403.9
67.5°	301.9	324.2	348.4	366.6	371.6
70°	262.6	285.8	312.0	331.2	337.3
72.5°	224.2	248.4	277.7	298.9	303.0
75°	185.8	212.1	244.4	264.6	269.6
77.5°	148.5	178.7	209.0	231.3	235.3
80°	114.1	144.4	178.7	201.0	205.0
82.5°	82.8	115.1	150.5	171.7	179.8
85°	55.5	88.9	124.2	146.4	154.5
87.5°	35.3	67.7	102.0	125.2	132.3
90°	16.2	48.5	82.8	106.0	113.1
92.5°	14.1	43.4	78.8	101.0	108.1
95°	13.1	39.4	73.7	95.9	103.0
97.5°	12.1	36.4	69.7	90.9	98.0
100°	11.1	32.3	64.6	85.8	91.9
102.5°	10.1	29.3	60.6	80.8	86.8
105°	9.1	25.2	55.5	75.7	82.8
107.5°	8.1	22.2	51.5	71.7	77.8
110°	7.1	19.2	47.5	66.7	73.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	16.2	43.4	61.6	68.7
115°	6.1	13.1	39.4	57.6	63.6
117.5°	5.0	10.1	35.3	52.5	59.6
120°	5.0	8.1	31.3	48.5	54.5
122.5°	4.0	5.0	27.3	43.4	49.5
125°	4.0	3.0	23.2	39.4	44.4
127.5°	3.0	2.0	19.2	34.3	40.4
130°	3.0	2.0	16.2	30.3	35.3
132.5°	2.0	2.0	12.1	26.3	30.3
135°	2.0	1.0	8.1	21.2	26.3
137.5°	2.0	1.0	5.0	17.2	21.2
140°	1.0	1.0	2.0	13.1	17.2
142.5°	1.0	0.0	0.0	9.1	13.1
145°	1.0	0.0	0.0	5.0	9.1
147.5°	0.0	0.0	0.0	2.0	4.0
150°	0.0	0.0	0.0	0.0	1.0
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	16.84	18.37	17.29	18.81	19.27	17.88	19.41	18.33	19.85	20.31
	3H	18.49	19.88	18.96	20.33	20.83	20.06	21.45	20.53	21.90	22.40
	4H	19.06	20.37	19.55	20.84	21.36	21.02	22.34	21.51	22.80	23.32
	6H	19.43	20.66	19.94	21.14	21.68	21.92	23.14	22.42	23.62	24.16
	8H	19.54	20.71	20.05	21.22	21.76	22.35	23.52	22.87	24.03	24.57
	12H	19.60	20.72	20.12	21.22	21.79	22.81	23.93	23.33	24.43	25.00
4H	2H	17.60	18.91	18.09	19.38	19.90	18.41	19.73	18.90	20.20	20.72
	3H	19.48	20.59	19.98	21.10	21.65	20.80	21.92	21.31	22.43	22.97
	4H	20.18	21.20	20.70	21.72	22.30	21.92	22.94	22.44	23.46	24.03
	6H	20.69	21.58	21.23	22.13	22.72	22.98	23.88	23.53	24.43	25.02
	8H	20.84	21.68	21.39	22.23	22.83	23.50	24.34	24.05	24.89	25.49
	12H	20.94	21.70	21.51	22.28	22.88	24.06	24.82	24.63	25.40	26.01
8H	4H	20.66	21.50	21.21	22.05	22.65	22.18	23.02	22.73	23.57	24.17
	6H	21.33	22.03	21.91	22.63	23.23	23.40	24.11	23.98	24.70	25.31
	8H	21.56	22.20	22.16	22.81	23.43	24.04	24.67	24.63	25.28	25.90
	12H	21.75	22.31	22.34	22.91	23.59	24.75	25.32	25.35	25.91	26.60
12H	4H	20.76	21.52	21.33	22.10	22.71	22.19	22.96	22.77	23.53	24.14
	6H	21.49	22.13	22.08	22.73	23.35	23.45	24.09	24.04	24.69	25.31
	8H	21.81	22.37	22.40	22.97	23.65	24.15	24.72	24.75	25.31	26.00