

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: P243709

Luminaire Tested: S125DRP-H375D840-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243709  
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-H375D840-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

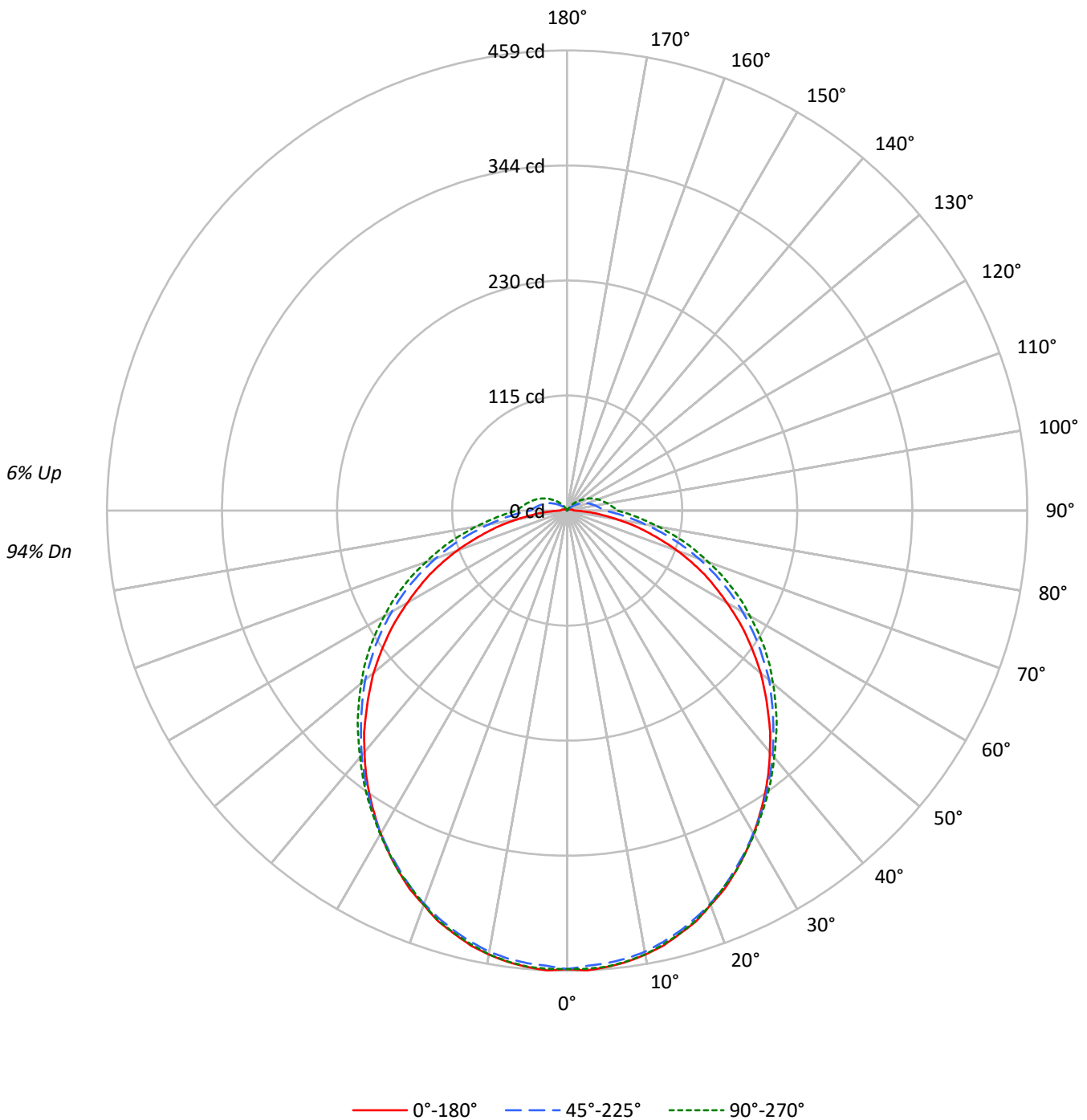
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1420.3 lumens  
Efficiency: N/A  
Efficacy: 126.8 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): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	3251	3251	3251
5°	3254	3187	3198
10°	3234	3134	3126
15°	3195	3059	3037
20°	3141	2976	2935
25°	3086	2880	2835
30°	3016	2783	2725
35°	2941	2688	2626
40°	2866	2596	2529
45°	2788	2503	2448
50°	2717	2428	2363
55°	2628	2333	2285
60°	2520	2231	2185
65°	2432	2123	2088
70°	2290	1991	1962
75°	2095	1835	1849
80°	1868	1668	1708
85°	1663	1559	1625

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2788 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.3	3.0
10°-20°	123.0	8.7
20°-30°	183.1	12.9
30°-40°	216.9	15.3
40°-50°	224.4	15.8
50°-60°	207.0	14.6
60°-70°	167.2	11.8
70°-80°	111.8	7.9
80°-90°	57.7	4.1
90°-100°	32.3	2.3
100°-110°	24.0	1.7
110°-120°	16.0	1.1
120°-130°	8.9	0.6
130°-140°	4.0	0.3
140°-150°	0.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	349.3	24.6
0°-40°	566.2	39.9
0°-60°	997.5	70.2
0°-90°	1334.2	93.9
90°-120°	72.3	5.1
90°-150°	86.1	6.1
90°-180°	86.0	6.1
0°-180°	1420.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	457	457	453	457	457	43
15°	437	438	434	437	436	123
25°	397	399	396	398	397	183
35°	344	347	346	348	348	215
45°	283	288	290	295	296	219
55°	219	225	233	238	241	195
65°	151	160	171	179	181	149
75°	82	95	108	118	121	88
85°	25	40	55	65	68	26
90°	7	21	37	47	50	5
95°	6	18	33	42	45	5
105°	4	11	25	34	37	4
115°	3	6	17	25	28	3
125°	2	2	10	16	19	2
135°	1	1	4	10	11	1
145°	0	0	0	2	4	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°	457.4	457.4	457.4	457.4	457.4
2.5°	459.1	457.9	454.5	457.9	457.4
5°	457.0	456.6	453.2	456.6	456.6
7.5°	454.0	453.6	450.7	454.0	453.6
10°	449.8	449.8	446.9	449.4	449.4
12.5°	444.3	444.3	440.9	443.9	443.1
15°	436.7	438.0	434.2	436.7	436.3
17.5°	429.1	429.1	426.1	428.3	428.3
20°	418.5	420.2	417.3	419.4	418.1
22.5°	409.2	410.1	407.1	409.2	407.1
25°	397.4	399.1	395.7	397.8	397.4
27.5°	385.1	386.4	383.9	386.4	385.1
30°	372.0	373.3	371.6	373.3	372.9
32.5°	358.1	360.6	359.3	360.6	360.2
35°	344.1	346.7	345.8	347.5	347.9
37.5°	329.8	332.3	332.3	334.4	334.8
40°	314.5	317.9	318.8	321.7	321.3
42.5°	299.7	303.1	304.4	308.2	308.2
45°	283.3	287.9	290.4	295.1	295.5
47.5°	267.6	272.7	276.5	280.7	281.6
50°	252.0	256.6	263.0	267.2	268.0
52.5°	235.1	241.0	247.3	253.2	254.9
55°	218.6	225.3	232.9	238.4	240.6
57.5°	201.7	208.8	217.3	224.1	225.8
60°	183.9	192.4	202.1	208.8	210.5
62.5°	167.4	176.7	186.9	194.0	196.6
65°	151.3	160.2	171.2	178.8	180.9
67.5°	134.0	143.7	155.2	163.6	165.7
70°	116.7	127.3	139.5	147.5	149.7
72.5°	98.9	110.8	123.9	132.7	135.3
75°	82.4	94.7	108.2	117.5	120.9
77.5°	66.8	79.5	93.0	102.7	105.7
80°	51.2	64.3	79.1	89.2	92.2
82.5°	37.2	51.2	66.4	76.5	79.5
85°	25.4	39.7	55.4	65.1	68.5
87.5°	15.6	29.6	45.7	55.4	58.8
90°	7.2	21.1	36.8	46.9	50.3
92.5°	6.3	19.4	34.7	44.8	47.8
95°	5.9	17.8	32.6	42.3	45.2
97.5°	5.5	16.1	30.4	40.2	43.1
100°	5.1	14.4	28.7	38.0	41.0
102.5°	4.7	13.1	26.6	35.9	38.5
105°	4.2	11.4	24.9	33.8	36.8
107.5°	3.8	9.7	23.3	31.7	34.7
110°	3.4	8.5	21.1	29.6	32.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	7.2	19.4	27.5	30.4
115°	3.0	5.9	17.3	25.4	28.3
117.5°	2.5	4.7	15.2	23.3	26.2
120°	2.1	3.4	13.5	21.1	24.1
122.5°	2.1	2.5	11.8	19.0	22.0
125°	1.7	1.7	10.1	16.5	19.4
127.5°	1.7	1.3	8.5	14.8	16.9
130°	1.3	0.8	7.2	13.1	15.2
132.5°	1.3	0.8	5.5	11.4	13.5
135°	0.8	0.8	3.8	9.7	11.4
137.5°	0.8	0.4	2.5	7.6	9.7
140°	0.4	0.4	0.8	5.9	7.6
142.5°	0.4	0.4	0.4	4.2	5.9
145°	0.4	0.0	0.0	2.5	3.8
147.5°	0.4	0.0	0.0	0.8	2.1
150°	0.0	0.0	0.0	0.0	0.4
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	14.01	15.54	14.47	15.98	16.44	15.10	16.63	15.56	17.07	17.54
	3H	15.66	17.05	16.13	17.50	18.01	17.26	18.66	17.73	19.11	19.61
	4H	16.23	17.55	16.72	18.01	18.53	18.23	19.55	18.72	20.01	20.53
	6H	16.62	17.84	17.12	18.32	18.86	19.13	20.36	19.63	20.84	21.37
	8H	16.72	17.89	17.24	18.40	18.94	19.56	20.73	20.08	21.24	21.78
	12H	16.79	17.91	17.31	18.41	18.98	20.01	21.14	20.53	21.63	22.21
4H	2H	14.77	16.09	15.27	16.56	17.08	15.63	16.95	16.12	17.41	17.93
	3H	16.66	17.77	17.16	18.29	18.83	18.01	19.13	18.51	19.64	20.18
	4H	17.36	18.38	17.88	18.90	19.48	19.12	20.14	19.64	20.66	21.24
	6H	17.87	18.77	18.42	19.32	19.91	20.19	21.09	20.73	21.63	22.22
	8H	18.03	18.87	18.58	19.42	20.02	20.70	21.55	21.25	22.09	22.70
	12H	18.13	18.89	18.70	19.47	20.08	21.26	22.02	21.83	22.60	23.20
8H	4H	17.84	18.68	18.39	19.23	19.83	19.38	20.22	19.93	20.77	21.37
	6H	18.51	19.22	19.09	19.81	20.42	20.60	21.31	21.18	21.90	22.51
	8H	18.75	19.39	19.35	19.99	20.61	21.23	21.87	21.83	22.48	23.10
	12H	18.94	19.51	19.53	20.10	20.78	21.94	22.51	22.54	23.10	23.79
12H	4H	17.94	18.70	18.51	19.28	19.89	19.39	20.16	19.97	20.73	21.34
	6H	18.67	19.31	19.27	19.92	20.54	20.65	21.29	21.24	21.89	22.51
	8H	18.99	19.56	19.59	20.15	20.84	21.35	21.92	21.95	22.51	23.20