

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: P242843

Luminaire Tested: S125DRP-S1090D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242843  
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-S1090D830-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

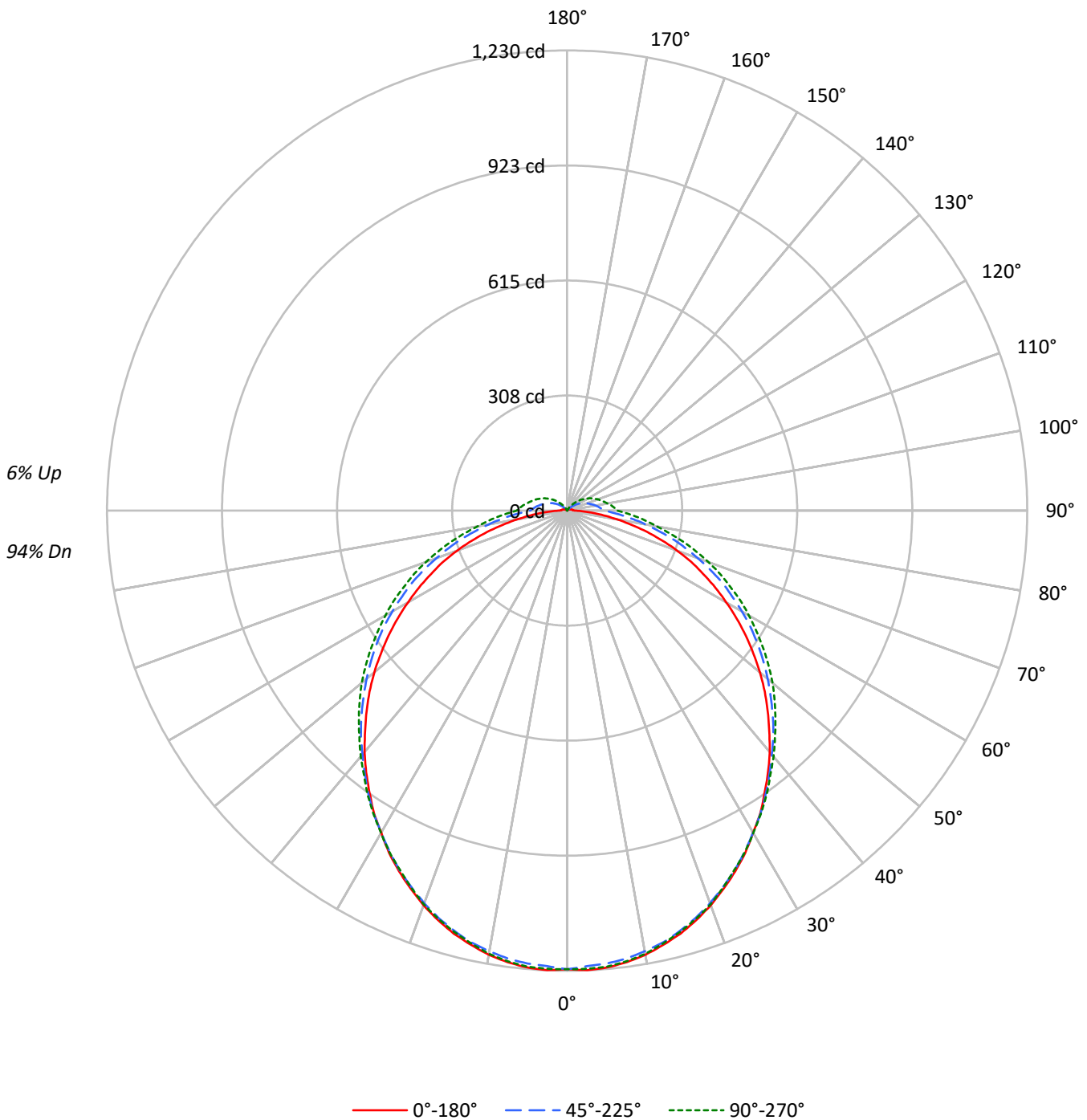
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3797.9 lumens  
Efficiency: N/A  
Efficacy: 109.1 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): 34.8  
Input Voltage (V): 120  
Input Current (Ain): 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	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°	8714	8714	8714
5°	8730	8546	8570
10°	8668	8386	8369
15°	8565	8197	8115
20°	8425	7964	7862
25°	8259	7716	7553
30°	8058	7444	7272
35°	7870	7194	7014
40°	7679	6930	6754
45°	7462	6704	6523
50°	7257	6457	6316
55°	7009	6225	6074
60°	6737	5959	5827
65°	6455	5681	5549
70°	6132	5301	5261
75°	5623	4933	4907
80°	4954	4485	4521
85°	4327	4160	4363

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7462 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.0	3.1
10°-20°	329.3	8.7
20°-30°	489.7	12.9
30°-40°	580.0	15.3
40°-50°	599.6	15.8
50°-60°	552.4	14.5
60°-70°	446.5	11.8
70°-80°	298.8	7.9
80°-90°	154.4	4.1
90°-100°	87.0	2.3
100°-110°	64.1	1.7
110°-120°	42.9	1.1
120°-130°	24.3	0.6
130°-140°	10.6	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	935.1	24.6
0°-40°	1515.1	39.9
0°-60°	2667.1	70.2
0°-90°	3566.9	93.9
90°-120°	194.0	5.1
90°-150°	231.1	6.1
90°-180°	231.0	6.1
0°-180°	3797.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1226	1224	1215	1225	1224	116
15°	1171	1172	1164	1171	1166	330
25°	1064	1067	1060	1065	1059	490
35°	921	929	926	929	929	576
45°	758	772	778	786	787	585
55°	583	602	621	635	639	521
65°	402	429	458	476	481	398
75°	221	252	291	315	321	234
85°	66	106	148	174	184	69
90°	19	58	99	126	135	13
95°	16	47	88	114	123	12
105°	11	30	66	90	99	11
115°	7	16	47	68	76	7
125°	5	4	28	47	53	4
135°	2	1	10	25	31	2
145°	1	0	0	6	11	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°	1226.0	1226.0	1226.0	1226.0	1226.0
2.5°	1229.6	1227.2	1218.8	1227.2	1226.0
5°	1226.0	1223.6	1215.2	1224.8	1223.6
7.5°	1217.6	1216.4	1208.0	1216.4	1215.2
10°	1205.6	1205.6	1196.0	1204.4	1203.2
12.5°	1188.8	1190.0	1182.7	1188.8	1185.1
15°	1170.7	1171.9	1163.5	1170.7	1165.9
17.5°	1147.9	1150.3	1141.9	1147.9	1144.3
20°	1122.6	1125.0	1116.6	1120.2	1120.2
22.5°	1093.8	1098.6	1089.0	1093.8	1090.2
25°	1063.7	1067.4	1060.1	1064.9	1058.9
27.5°	1031.3	1036.1	1027.7	1031.3	1028.9
30°	994.0	1001.2	994.0	996.4	995.2
32.5°	960.4	966.4	961.6	964.0	962.8
35°	920.7	929.1	925.5	929.1	929.1
37.5°	882.2	889.5	888.3	893.1	891.9
40°	842.6	852.2	851.0	855.8	858.2
42.5°	799.3	812.5	816.1	822.1	822.1
45°	758.4	771.7	777.7	786.1	787.3
47.5°	716.4	728.4	738.0	750.0	752.4
50°	673.1	686.3	699.5	712.8	716.4
52.5°	627.4	644.3	661.1	675.5	677.9
55°	583.0	602.2	621.4	634.6	639.4
57.5°	537.3	560.1	581.8	596.2	599.8
60°	491.6	515.6	539.7	557.7	561.3
62.5°	447.1	471.2	497.6	518.1	522.9
65°	401.5	429.1	458.0	476.0	480.8
67.5°	359.4	385.8	414.7	436.3	442.3
70°	312.5	340.2	371.4	394.2	401.5
72.5°	266.8	295.7	330.5	355.8	360.6
75°	221.2	252.4	290.9	314.9	320.9
77.5°	176.7	212.7	248.8	275.3	280.1
80°	135.8	171.9	212.7	239.2	244.0
82.5°	98.6	137.0	179.1	204.3	214.0
85°	66.1	105.8	147.8	174.3	183.9
87.5°	42.1	80.5	121.4	149.0	157.5
90°	19.2	57.7	98.6	126.2	134.6
92.5°	16.8	51.7	93.8	120.2	128.6
95°	15.6	46.9	87.7	114.2	122.6
97.5°	14.4	43.3	82.9	108.2	116.6
100°	13.2	38.5	76.9	102.2	109.4
102.5°	12.0	34.9	72.1	96.2	103.4
105°	10.8	30.0	66.1	90.1	98.6
107.5°	9.6	26.4	61.3	85.3	92.6
110°	8.4	22.8	56.5	79.3	87.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.4	19.2	51.7	73.3	81.7
115°	7.2	15.6	46.9	68.5	75.7
117.5°	6.0	12.0	42.1	62.5	70.9
120°	6.0	9.6	37.3	57.7	64.9
122.5°	4.8	6.0	32.5	51.7	58.9
125°	4.8	3.6	27.6	46.9	52.9
127.5°	3.6	2.4	22.8	40.9	48.1
130°	3.6	2.4	19.2	36.1	42.1
132.5°	2.4	2.4	14.4	31.3	36.1
135°	2.4	1.2	9.6	25.2	31.3
137.5°	2.4	1.2	6.0	20.4	25.2
140°	1.2	1.2	2.4	15.6	20.4
142.5°	1.2	0.0	0.0	10.8	15.6
145°	1.2	0.0	0.0	6.0	10.8
147.5°	0.0	0.0	0.0	2.4	4.8
150°	0.0	0.0	0.0	0.0	1.2
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	17.44	18.97	17.90	19.41	19.88	18.48	20.01	18.94	20.45	20.92
	3H	19.09	20.48	19.56	20.93	21.44	20.66	22.05	21.13	22.50	23.01
	4H	19.66	20.98	20.15	21.45	21.97	21.62	22.94	22.11	23.41	23.93
	6H	20.04	21.26	20.54	21.75	22.28	22.52	23.75	23.02	24.23	24.76
	8H	20.14	21.32	20.66	21.82	22.36	22.95	24.13	23.47	24.63	25.17
	12H	20.20	21.33	20.73	21.83	22.40	23.41	24.54	23.94	25.04	25.61
4H	2H	18.20	19.52	18.69	19.99	20.51	19.02	20.33	19.51	20.80	21.32
	3H	20.08	21.20	20.58	21.71	22.25	21.41	22.53	21.91	23.04	23.58
	4H	20.78	21.80	21.31	22.32	22.90	22.52	23.54	23.05	24.06	24.64
	6H	21.29	22.19	21.84	22.74	23.33	23.59	24.48	24.13	25.03	25.62
	8H	21.44	22.28	21.99	22.83	23.44	24.11	24.95	24.66	25.50	26.10
	12H	21.54	22.31	22.11	22.88	23.49	24.66	25.43	25.24	26.00	26.61
8H	4H	21.27	22.11	21.82	22.66	23.26	22.78	23.62	23.33	24.17	24.77
	6H	21.93	22.64	22.51	23.23	23.84	24.00	24.71	24.59	25.30	25.91
	8H	22.17	22.81	22.77	23.41	24.03	24.64	25.28	25.24	25.88	26.50
	12H	22.35	22.92	22.95	23.51	24.20	25.35	25.92	25.95	26.51	27.20
12H	4H	21.37	22.13	21.94	22.71	23.31	22.80	23.56	23.37	24.14	24.75
	6H	22.09	22.73	22.69	23.34	23.96	24.05	24.69	24.65	25.30	25.92
	8H	22.41	22.98	23.01	23.57	24.26	24.76	25.33	25.35	25.92	26.61