

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: P242885

Luminaire Tested: S125RDRP-S850D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-27)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-S850D840-X4F0-XX-UDD-F-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

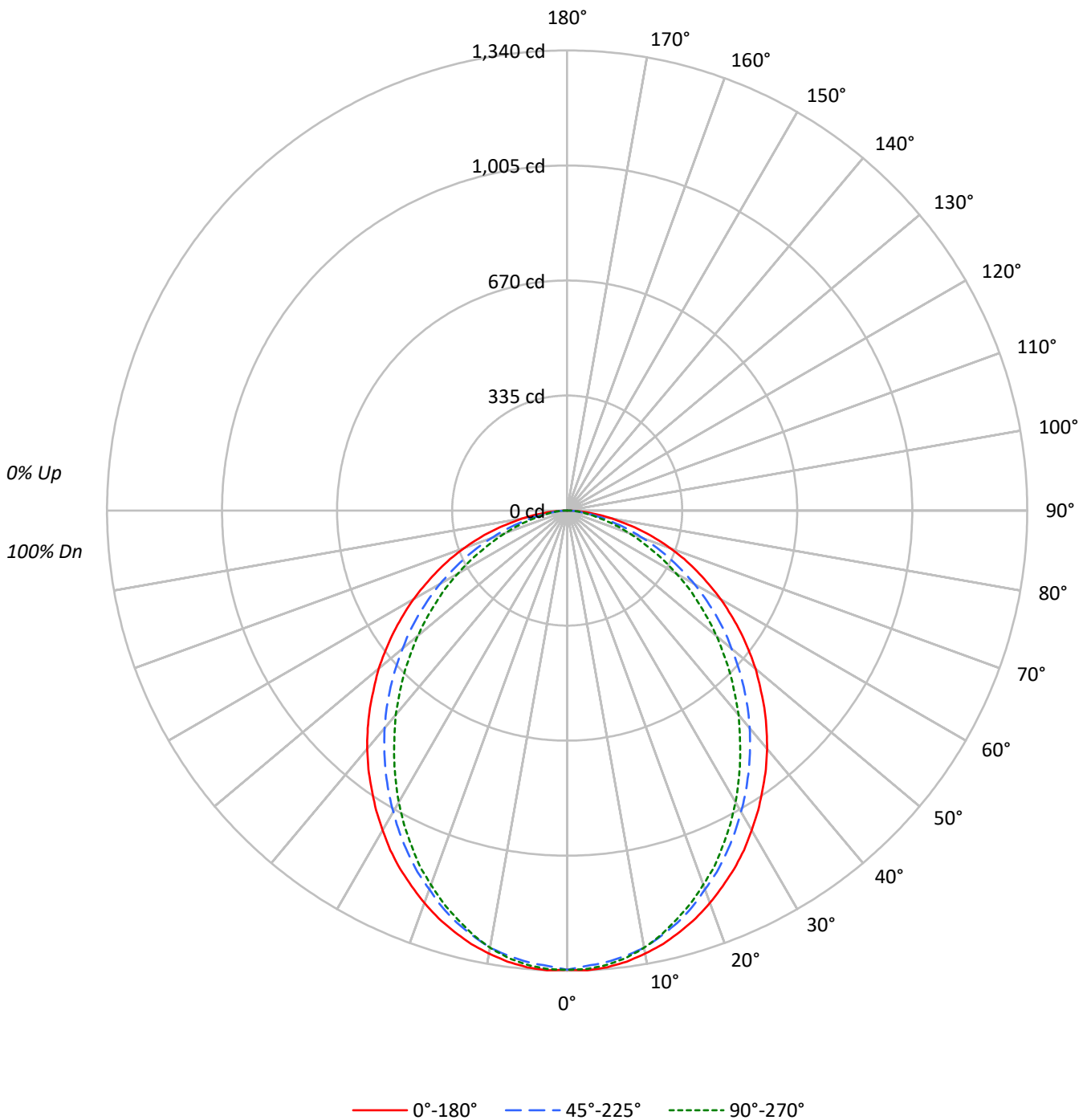
Lumens per Lamp: N/A
Luminaire Lumens: 3159.0 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')
CIE Type: Direct

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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36					36			
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33					33			
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	29					29			
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9503	9503	9503
5°	9525	9417	9475
10°	9453	9329	9329
15°	9340	9139	9065
20°	9196	8876	8768
25°	9028	8616	8426
30°	8818	8313	8048
35°	8604	8000	7623
40°	8404	7674	7205
45°	8161	7308	6750
50°	7917	6912	6275
55°	7633	6531	5768
60°	7350	6073	5225
65°	7015	5536	4603
70°	6631	4869	3967
75°	6102	4105	3301
80°	5374	3225	2771
85°	4526	2634	2471

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.8	4.0
10°-20°	351.7	11.1
20°-30°	509.9	16.1
30°-40°	580.9	18.4
40°-50°	566.2	17.9
50°-60°	476.5	15.1
60°-70°	333.9	10.6
70°-80°	171.2	5.4
80°-90°	42.7	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	987.4	31.3
0°-40°	1568.4	49.6
0°-60°	2611.2	82.7
0°-90°	3159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3159.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1337	1337	1337	1337	1337	
5°	1335	1331	1320	1330	1328	127
15°	1269	1263	1242	1241	1232	358
25°	1151	1136	1099	1086	1074	530
35°	992	968	922	893	879	621
45°	812	783	727	687	672	626
55°	616	584	527	482	466	551
65°	417	383	329	289	274	413
75°	222	192	150	127	120	235
85°	56	37	32	31	30	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1337.1	1337.1	1337.1	1337.1	1337.1
2.5°	1340.1	1337.1	1327.0	1337.1	1336.1
5°	1335.0	1331.0	1319.9	1330.0	1328.0
7.5°	1324.9	1320.9	1307.8	1315.9	1313.8
10°	1309.8	1306.8	1292.6	1295.7	1292.6
12.5°	1292.6	1288.6	1268.4	1270.4	1265.4
15°	1269.4	1263.3	1242.1	1241.1	1232.0
17.5°	1245.2	1236.1	1210.8	1205.8	1198.7
20°	1215.9	1205.8	1173.5	1168.4	1159.3
22.5°	1183.6	1173.5	1139.1	1128.0	1120.9
25°	1151.2	1136.1	1098.7	1085.6	1074.5
27.5°	1114.9	1096.7	1057.3	1040.2	1029.1
30°	1074.5	1055.3	1012.9	989.7	980.6
32.5°	1035.1	1011.9	968.5	942.2	930.1
35°	991.7	967.5	922.0	892.7	878.6
37.5°	950.3	921.0	874.5	840.2	826.1
40°	905.8	875.6	827.1	788.7	776.6
42.5°	859.4	828.1	777.6	741.2	722.1
45°	811.9	782.6	727.1	686.7	671.6
47.5°	762.4	732.2	676.6	635.2	618.0
50°	716.0	682.7	625.1	582.7	567.5
52.5°	665.5	631.2	577.6	531.2	516.0
55°	616.0	583.7	527.1	481.7	465.5
57.5°	565.5	531.2	476.7	432.2	418.1
60°	517.1	481.7	427.2	382.7	367.6
62.5°	465.5	432.2	376.7	336.3	321.1
65°	417.1	382.7	329.2	288.8	273.7
67.5°	368.6	334.3	282.8	244.4	232.3
70°	319.1	284.8	234.3	203.0	190.9
72.5°	270.6	237.3	190.9	162.6	155.5
75°	222.2	191.9	149.5	127.2	120.2
77.5°	172.7	148.5	113.1	95.9	89.9
80°	131.3	107.0	78.8	69.7	67.7
82.5°	90.9	69.7	52.5	49.5	48.5
85°	55.5	37.4	32.3	31.3	30.3
87.5°	23.2	16.2	15.1	15.1	14.1
90°	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	19.16	20.74	19.53	21.05	21.37	17.59	19.17	17.96	19.48	19.80
	3H	20.95	22.37	21.32	22.69	23.05	18.91	20.33	19.29	20.65	21.02
	4H	21.61	22.94	22.01	23.29	23.67	19.32	20.65	19.72	21.00	21.38
	6H	22.08	23.31	22.49	23.68	24.07	19.57	20.81	19.99	21.17	21.56
	8H	22.23	23.40	22.65	23.79	24.19	19.66	20.83	20.08	21.22	21.62
	12H	22.32	23.45	22.75	23.83	24.26	19.71	20.84	20.14	21.22	21.65
4H	2H	19.55	20.89	19.95	21.24	21.61	18.28	19.61	18.68	19.96	20.34
	3H	21.54	22.65	21.95	23.05	23.45	19.78	20.89	20.19	21.29	21.69
	4H	22.32	23.32	22.75	23.74	24.17	20.28	21.28	20.71	21.69	22.13
	6H	22.91	23.79	23.37	24.23	24.69	20.62	21.49	21.08	21.94	22.39
	8H	23.11	23.92	23.57	24.37	24.83	20.73	21.55	21.19	21.99	22.46
	12H	23.25	23.98	23.73	24.45	24.92	20.82	21.55	21.30	22.03	22.50
8H	4H	22.45	23.26	22.91	23.70	24.17	20.59	21.41	21.05	21.85	22.32
	6H	23.12	23.80	23.62	24.29	24.76	21.02	21.69	21.51	22.18	22.66
	8H	23.37	23.97	23.88	24.48	24.97	21.18	21.78	21.69	22.29	22.78
	12H	23.56	24.10	24.07	24.59	25.15	21.32	21.85	21.82	22.34	22.91
12H	4H	22.44	23.17	22.92	23.65	24.12	20.63	21.36	21.11	21.84	22.31
	6H	23.12	23.72	23.63	24.23	24.72	21.07	21.67	21.58	22.18	22.67
	8H	23.40	23.94	23.91	24.43	24.99	21.27	21.81	21.78	22.30	22.86