

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: P242625

Luminaire Tested: S124DRP-S795D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242625
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S795D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

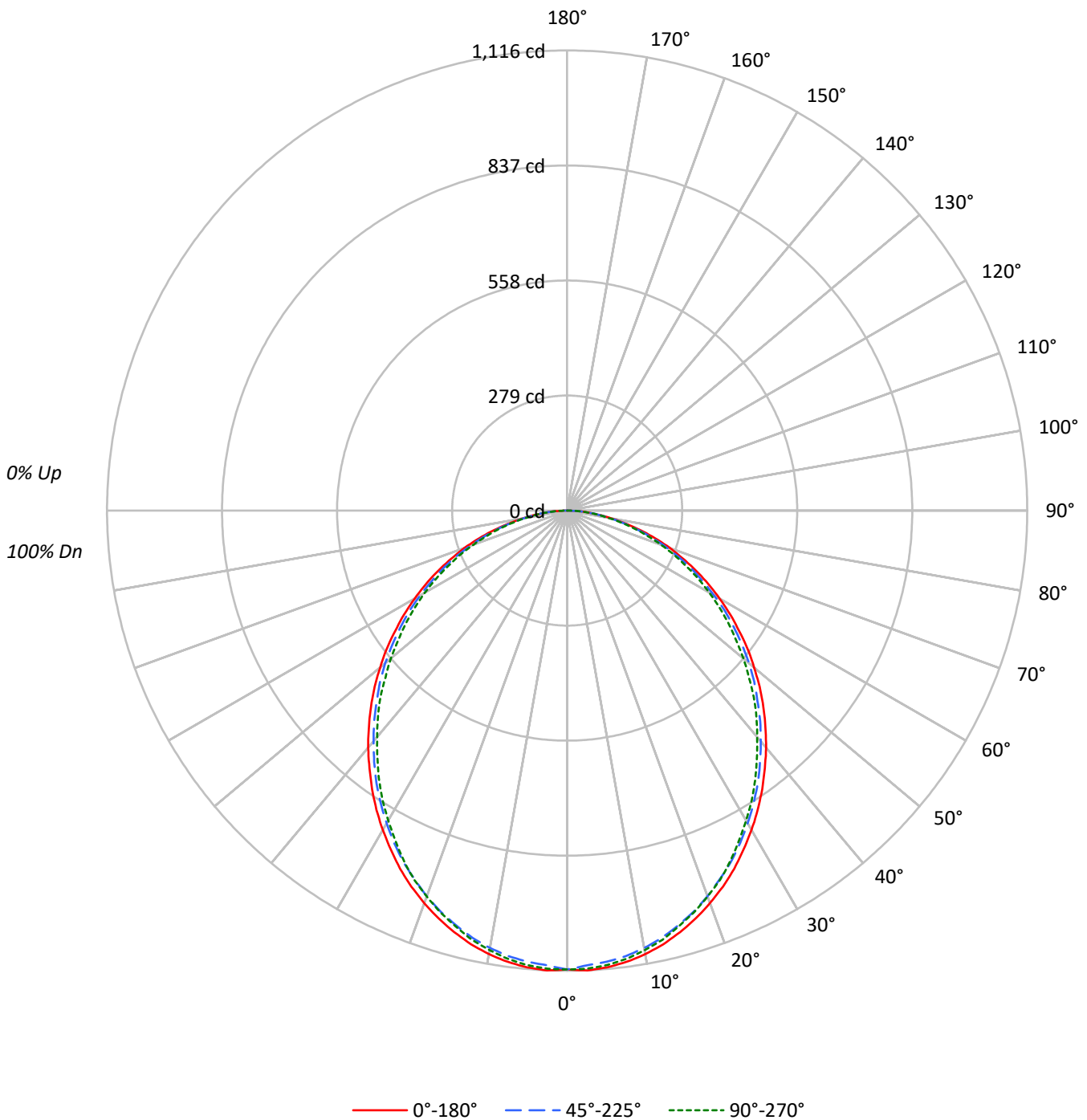
Lumens per Lamp: N/A
Luminaire Lumens: 2856.4 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9892	9892	9892
5°	9922	9803	9874
10°	9859	9723	9771
15°	9741	9584	9609
20°	9582	9414	9422
25°	9402	9218	9192
30°	9180	8988	8905
35°	8950	8747	8631
40°	8712	8474	8319
45°	8463	8205	8048
50°	8188	7965	7719
55°	7891	7656	7408
60°	7593	7308	7086
65°	7258	6977	6695
70°	6882	6536	6282
75°	6309	6003	5849
80°	5615	5385	5247
85°	4916	4732	4640

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	3.7
10°-20°	295.5	10.3
20°-30°	434.9	15.2
30°-40°	505.6	17.7
40°-50°	505.5	17.7
50°-60°	442.1	15.5
60°-70°	328.2	11.5
70°-80°	186.2	6.5
80°-90°	53.3	1.9
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°	835.3	29.2
0°-40°	1340.9	46.9
0°-60°	2288.5	80.1
0°-90°	2856.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1113	1113	1113	1113	1113	
5°	1112	1108	1099	1108	1107	106
15°	1058	1055	1042	1047	1044	298
25°	959	952	940	941	937	441
35°	825	819	806	800	795	516
45°	673	667	653	643	640	519
55°	509	506	494	483	478	456
65°	345	341	332	323	318	342
75°	184	179	175	171	170	195
85°	48	48	46	46	46	55
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1112.9	1112.9	1112.9	1112.9	1112.9
2.5°	1116.4	1113.7	1103.9	1112.9	1112.0
5°	1112.0	1108.4	1098.6	1108.4	1106.6
7.5°	1103.9	1100.4	1089.7	1097.7	1096.8
10°	1092.3	1088.8	1077.2	1084.3	1082.5
12.5°	1077.2	1073.6	1061.1	1069.2	1066.5
15°	1058.5	1054.9	1041.5	1046.9	1044.2
17.5°	1037.1	1032.6	1020.1	1023.7	1021.9
20°	1013.0	1008.5	995.2	997.8	996.0
22.5°	987.1	980.9	967.5	972.9	969.3
25°	958.6	952.3	939.9	940.8	937.2
27.5°	926.5	920.2	908.7	906.9	902.4
30°	894.4	887.3	875.7	872.1	867.6
32.5°	860.5	854.3	841.8	837.3	832.9
35°	824.8	818.6	806.1	799.9	795.4
37.5°	787.4	782.0	768.7	762.4	756.2
40°	750.8	743.7	730.3	721.4	716.9
42.5°	711.6	708.0	692.9	682.2	679.5
45°	673.2	667.0	652.7	642.9	640.2
47.5°	633.1	628.7	615.3	604.6	597.4
50°	592.1	588.5	576.0	563.6	558.2
52.5°	552.0	547.5	534.1	523.4	516.3
55°	509.2	506.5	494.0	483.3	478.0
57.5°	469.0	466.4	453.9	443.2	437.8
60°	427.1	422.7	411.1	403.1	398.6
62.5°	386.1	382.5	370.1	362.9	358.5
65°	345.1	340.6	331.7	322.8	318.3
67.5°	303.2	299.6	290.7	281.8	280.9
70°	264.8	258.6	251.5	244.3	241.7
72.5°	223.8	217.6	212.2	206.9	204.2
75°	183.7	179.2	174.8	171.2	170.3
77.5°	144.5	142.7	138.2	137.3	134.6
80°	109.7	107.0	105.2	103.4	102.5
82.5°	75.8	74.9	74.9	74.0	73.1
85°	48.2	48.2	46.4	46.4	45.5
87.5°	23.2	22.3	21.4	21.4	21.4
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	19.26	20.88	19.63	21.19	21.50	18.89	20.50	19.25	20.81	21.13
	3H	21.02	22.48	21.40	22.81	23.17	20.60	22.06	20.97	22.38	22.74
	4H	21.68	23.05	22.07	23.40	23.77	21.24	22.61	21.64	22.96	23.34
	6H	22.15	23.42	22.56	23.79	24.18	21.72	22.99	22.13	23.35	23.74
	8H	22.30	23.52	22.73	23.90	24.30	21.87	23.09	22.30	23.48	23.88
	12H	22.41	23.57	22.84	23.95	24.38	21.98	23.15	22.41	23.53	23.96
4H	2H	19.83	21.21	20.23	21.55	21.93	19.53	20.91	19.93	21.25	21.63
	3H	21.81	22.96	22.22	23.36	23.76	21.46	22.61	21.87	23.01	23.41
	4H	22.59	23.63	23.03	24.05	24.48	22.23	23.27	22.66	23.68	24.12
	6H	23.20	24.11	23.65	24.55	25.00	22.83	23.74	23.29	24.18	24.64
	8H	23.40	24.25	23.86	24.69	25.15	23.04	23.89	23.50	24.33	24.80
	12H	23.55	24.31	24.03	24.79	25.26	23.19	23.96	23.67	24.43	24.90
8H	4H	22.87	23.72	23.33	24.16	24.63	22.55	23.40	23.01	23.84	24.31
	6H	23.59	24.30	24.09	24.79	25.26	23.27	23.98	23.77	24.47	24.94
	8H	23.86	24.50	24.37	25.00	25.49	23.55	24.19	24.06	24.69	25.18
	12H	24.09	24.65	24.60	25.14	25.71	23.79	24.35	24.29	24.84	25.40
12H	4H	22.90	23.66	23.38	24.14	24.61	22.58	23.35	23.06	23.82	24.29
	6H	23.64	24.28	24.15	24.78	25.27	23.33	23.97	23.84	24.47	24.96
	8H	23.97	24.53	24.48	25.02	25.58	23.67	24.23	24.18	24.72	25.29