

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930427

Luminaire Tested: DFN2DS-PN2F0-020DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930427
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN2F0-020DS930-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

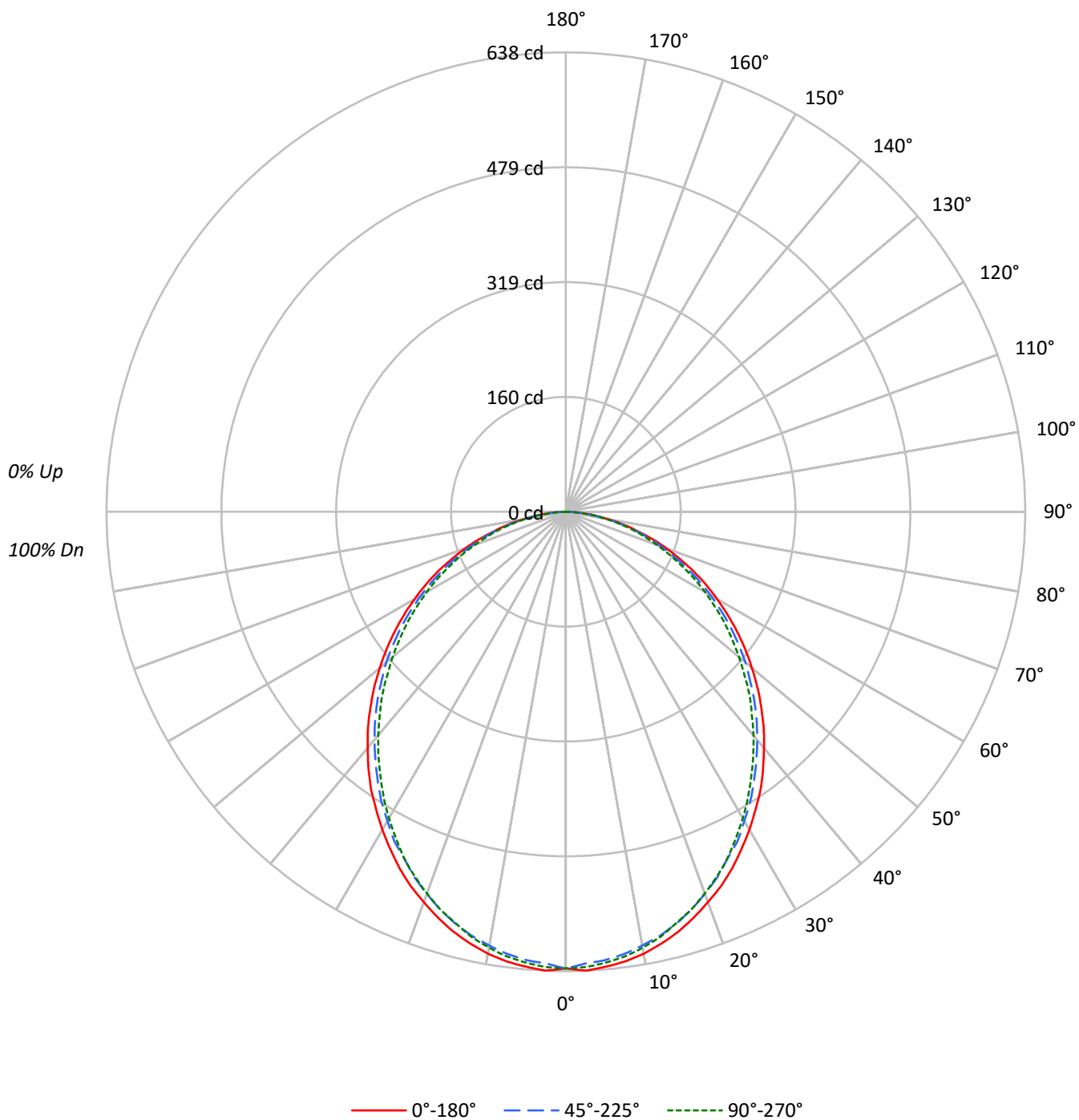
Lumens per Lamp: N/A
Luminaire Lumens: 1613.7 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1374	1374	1374
5°	1379	1359	1367
10°	1371	1345	1352
15°	1354	1328	1327
20°	1330	1302	1300
25°	1306	1269	1269
30°	1275	1240	1229
35°	1247	1205	1187
40°	1210	1169	1146
45°	1175	1134	1106
50°	1136	1097	1058
55°	1096	1055	1016
60°	1051	1004	967
65°	1003	954	910
70°	942	892	850
75°	857	821	802
80°	761	738	700
85°	619	591	532

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1175 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	3.7
10°-20°	168.0	10.4
20°-30°	246.8	15.3
30°-40°	286.7	17.8
40°-50°	286.3	17.7
50°-60°	249.7	15.5
60°-70°	184.6	11.4
70°-80°	104.4	6.5
80°-90°	27.6	1.7
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°	474.5	29.4
0°-40°	761.2	47.2
0°-60°	1297.2	80.4
0°-90°	1613.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1613.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	634	632	625	630	629	60
15°	604	600	592	595	592	170
25°	546	542	531	532	531	251
35°	472	465	456	452	449	294
45°	384	379	370	364	361	296
55°	290	287	279	272	269	260
65°	196	192	186	180	178	194
75°	102	101	98	94	96	109
85°	25	24	24	22	21	29
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.2	634.2	634.2	634.2	634.2
2.5°	637.9	634.9	628.1	634.2	633.1
5°	634.2	631.9	625.1	630.0	628.8
7.5°	630.0	626.3	619.6	624.5	623.3
10°	623.3	619.1	611.7	616.5	614.8
12.5°	614.1	610.5	603.2	606.2	605.0
15°	603.8	600.2	592.2	594.6	591.6
17.5°	591.0	587.4	579.4	582.4	579.4
20°	576.9	573.3	564.7	566.6	564.1
22.5°	562.9	557.5	549.5	549.5	548.3
25°	546.5	541.6	531.2	532.4	531.2
27.5°	528.1	523.9	516.0	514.2	511.1
30°	509.9	505.0	495.8	494.1	491.5
32.5°	490.3	486.7	476.9	473.3	470.8
35°	471.5	465.4	455.6	451.9	448.8
37.5°	450.1	444.6	434.8	430.6	427.5
40°	428.1	423.2	413.4	408.1	405.5
42.5°	406.8	401.9	392.2	386.1	382.4
45°	383.6	379.4	370.2	363.5	361.0
47.5°	361.0	356.8	347.0	340.3	336.7
50°	337.2	334.2	325.7	317.1	314.1
52.5°	314.1	309.8	301.9	295.2	291.0
55°	290.3	286.6	279.3	272.0	269.0
57.5°	266.5	263.5	255.5	248.2	245.7
60°	242.7	240.3	231.8	225.0	223.2
62.5°	219.6	215.2	209.2	203.1	200.7
65°	195.8	192.1	186.1	180.5	177.5
67.5°	171.4	168.3	162.8	158.6	156.2
70°	148.8	146.4	140.8	136.6	134.2
72.5°	125.7	123.2	120.1	115.9	114.1
75°	102.4	101.3	98.1	94.5	95.8
77.5°	81.7	79.3	78.0	76.2	74.4
80°	61.0	60.4	59.2	57.3	56.1
82.5°	41.5	41.5	40.9	38.5	38.5
85°	24.9	24.4	23.8	21.9	21.4
87.5°	11.0	9.8	8.6	6.8	6.1
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	12.39	14.00	12.75	14.31	14.62	11.94	13.55	12.31	13.87	14.18
	3H	14.14	15.59	14.51	15.92	16.28	13.64	15.10	14.02	15.43	15.79
	4H	14.78	16.15	15.18	16.50	16.88	14.29	15.66	14.69	16.00	16.38
	6H	15.25	16.52	15.66	16.88	17.28	14.75	16.02	15.16	16.38	16.77
	8H	15.39	16.61	15.82	16.99	17.39	14.89	16.10	15.32	16.49	16.89
	12H	15.48	16.64	15.91	17.03	17.45	14.97	16.13	15.40	16.51	16.94
4H	2H	12.95	14.32	13.35	14.66	15.04	12.59	13.96	12.99	14.31	14.69
	3H	14.92	16.07	15.33	16.47	16.87	14.51	15.66	14.92	16.06	16.46
	4H	15.70	16.73	16.13	17.15	17.58	15.27	16.31	15.71	16.72	17.16
	6H	16.29	17.20	16.75	17.64	18.10	15.86	16.77	16.32	17.21	17.66
	8H	16.48	17.33	16.94	17.77	18.24	16.05	16.89	16.51	17.33	17.80
	12H	16.62	17.38	17.10	17.85	18.32	16.16	16.92	16.64	17.40	17.87
8H	4H	15.97	16.82	16.43	17.26	17.73	15.60	16.44	16.06	16.89	17.35
	6H	16.69	17.39	17.18	17.88	18.35	16.30	17.01	16.80	17.49	17.97
	8H	16.95	17.58	17.46	18.08	18.57	16.55	17.18	17.06	17.69	18.18
	12H	17.14	17.70	17.65	18.19	18.75	16.73	17.29	17.24	17.78	18.34
12H	4H	16.00	16.76	16.48	17.23	17.70	15.63	16.39	16.11	16.87	17.34
	6H	16.73	17.36	17.24	17.87	18.36	16.36	16.99	16.87	17.50	17.99
	8H	17.05	17.60	17.55	18.09	18.65	16.67	17.22	17.17	17.72	18.28