

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: P930823

Luminaire Tested: DFN2DS-SQ2F0-040DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930823
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-SQ2F0-040DS930-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

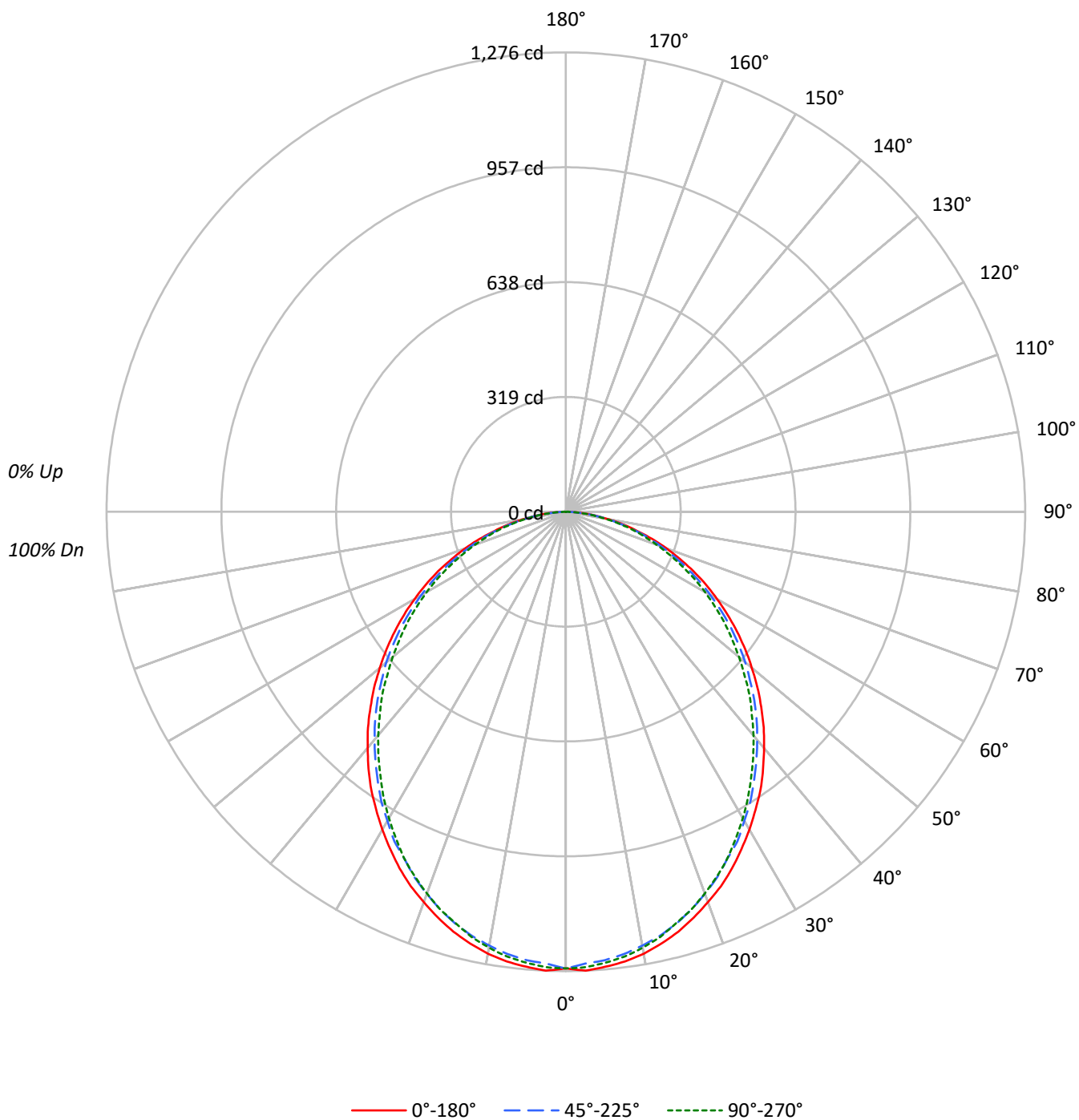
Lumens per Lamp: N/A
Luminaire Lumens: 3227.4 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 37.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
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°	2789	2789	2789
5°	2800	2760	2776
10°	2783	2732	2745
15°	2749	2696	2694
20°	2700	2643	2640
25°	2651	2578	2578
30°	2589	2518	2496
35°	2531	2446	2410
40°	2458	2374	2329
45°	2386	2302	2246
50°	2307	2228	2149
55°	2226	2142	2063
60°	2135	2039	1964
65°	2038	1936	1847
70°	1913	1811	1726
75°	1741	1668	1627
80°	1545	1498	1421
85°	1261	1201	1077

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2386 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	3.7
10°-20°	335.9	10.4
20°-30°	493.7	15.3
30°-40°	573.4	17.8
40°-50°	572.7	17.7
50°-60°	499.3	15.5
60°-70°	369.1	11.4
70°-80°	208.8	6.5
80°-90°	55.1	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°	949.0	29.4
0°-40°	1522.3	47.2
0°-60°	2594.3	80.4
0°-90°	3227.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3227.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1268	1264	1250	1260	1258	120
15°	1208	1200	1184	1189	1183	340
25°	1093	1083	1062	1065	1062	503
35°	943	931	911	904	898	589
45°	767	759	740	727	722	592
55°	581	573	559	544	538	519
65°	392	384	372	361	355	387
75°	205	202	196	189	192	219
85°	50	49	48	44	43	59
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1268.5	1268.5	1268.5	1268.5	1268.5
2.5°	1275.9	1269.8	1256.3	1268.5	1266.2
5°	1268.5	1263.7	1250.2	1259.9	1257.6
7.5°	1259.9	1252.7	1239.2	1249.1	1246.6
10°	1246.6	1238.1	1223.5	1233.2	1229.5
12.5°	1228.2	1221.0	1206.4	1212.5	1209.9
15°	1207.5	1200.3	1184.4	1189.2	1183.2
17.5°	1181.9	1174.7	1158.8	1164.8	1158.8
20°	1153.8	1146.5	1129.5	1133.1	1128.4
22.5°	1125.8	1114.8	1098.9	1098.9	1096.5
25°	1092.8	1083.1	1062.4	1064.8	1062.4
27.5°	1056.2	1047.7	1032.0	1028.3	1022.3
30°	1019.7	1009.9	991.7	988.0	983.1
32.5°	980.7	973.4	953.9	946.5	941.6
35°	942.9	930.7	911.2	903.8	897.7
37.5°	900.2	889.2	869.6	861.1	855.0
40°	856.3	846.5	826.9	816.1	811.2
42.5°	813.6	803.8	784.4	772.0	764.8
45°	767.2	758.8	740.3	727.1	722.1
47.5°	722.1	713.5	694.1	680.6	673.4
50°	674.5	668.4	651.3	634.2	628.1
52.5°	628.1	619.6	603.8	590.4	581.8
55°	580.7	573.3	558.7	544.0	538.0
57.5°	533.0	527.0	511.0	496.4	491.5
60°	485.4	480.6	463.6	450.1	446.5
62.5°	439.1	430.6	418.4	406.2	401.3
65°	391.6	384.2	372.0	361.0	355.0
67.5°	342.8	336.6	325.8	317.2	312.3
70°	297.6	292.7	281.7	273.2	268.4
72.5°	251.3	246.4	240.3	231.8	228.1
75°	204.9	202.5	196.3	189.1	191.5
77.5°	163.4	158.5	156.1	152.4	148.8
80°	122.0	120.7	118.3	114.7	112.2
82.5°	83.0	83.0	81.8	76.9	76.9
85°	50.0	48.8	47.6	43.8	42.7
87.5°	22.0	19.6	17.1	13.4	12.1
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	14.85	16.46	15.21	16.77	17.09	14.40	16.01	14.77	16.33	16.64
	3H	16.60	18.05	16.97	18.38	18.74	16.11	17.56	16.48	17.89	18.25
	4H	17.24	18.61	17.64	18.96	19.34	16.75	18.12	17.15	18.46	18.84
	6H	17.71	18.98	18.12	19.34	19.74	17.21	18.48	17.62	18.84	19.23
	8H	17.85	19.07	18.28	19.45	19.85	17.35	18.56	17.78	18.95	19.35
	12H	17.95	19.11	18.37	19.49	19.92	17.43	18.59	17.86	18.97	19.40
4H	2H	15.41	16.78	15.81	17.12	17.50	15.05	16.42	15.45	16.77	17.15
	3H	17.38	18.53	17.79	18.93	19.33	16.98	18.12	17.38	18.52	18.92
	4H	18.16	19.19	18.59	19.61	20.04	17.73	18.77	18.17	19.18	19.62
	6H	18.75	19.66	19.21	20.10	20.56	18.32	19.23	18.78	19.67	20.12
	8H	18.94	19.79	19.40	20.23	20.70	18.51	19.35	18.97	19.80	20.26
	12H	19.08	19.84	19.56	20.31	20.78	18.62	19.38	19.10	19.86	20.33
8H	4H	18.43	19.28	18.89	19.72	20.19	18.06	18.90	18.52	19.35	19.81
	6H	19.15	19.85	19.64	20.34	20.81	18.76	19.47	19.26	19.96	20.43
	8H	19.41	20.04	19.92	20.54	21.03	19.01	19.64	19.52	20.15	20.64
	12H	19.61	20.16	20.11	20.65	21.21	19.19	19.75	19.70	20.24	20.80
12H	4H	18.46	19.22	18.94	19.69	20.16	18.09	18.85	18.57	19.33	19.80
	6H	19.19	19.82	19.70	20.33	20.82	18.82	19.45	19.33	19.96	20.45
	8H	19.51	20.06	20.01	20.55	21.11	19.13	19.69	19.63	20.18	20.74